

ANNUAL REPORT *of the*
MUNICIPAL BOARD
of the CITY *of* MANILA



FOR THE
FISCAL YEAR 1910

MANILA
BUREAU OF PRINTING
1910

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London. Municipal Board

LETTER OF TRANSMITTAL.

MANILA, P. I., *October 27, 1910.*

SIR: The Municipal Board has the honor to submit herewith its annual report covering the fiscal year 1910, from July 1, 1909, to June 30, 1910, inclusive.

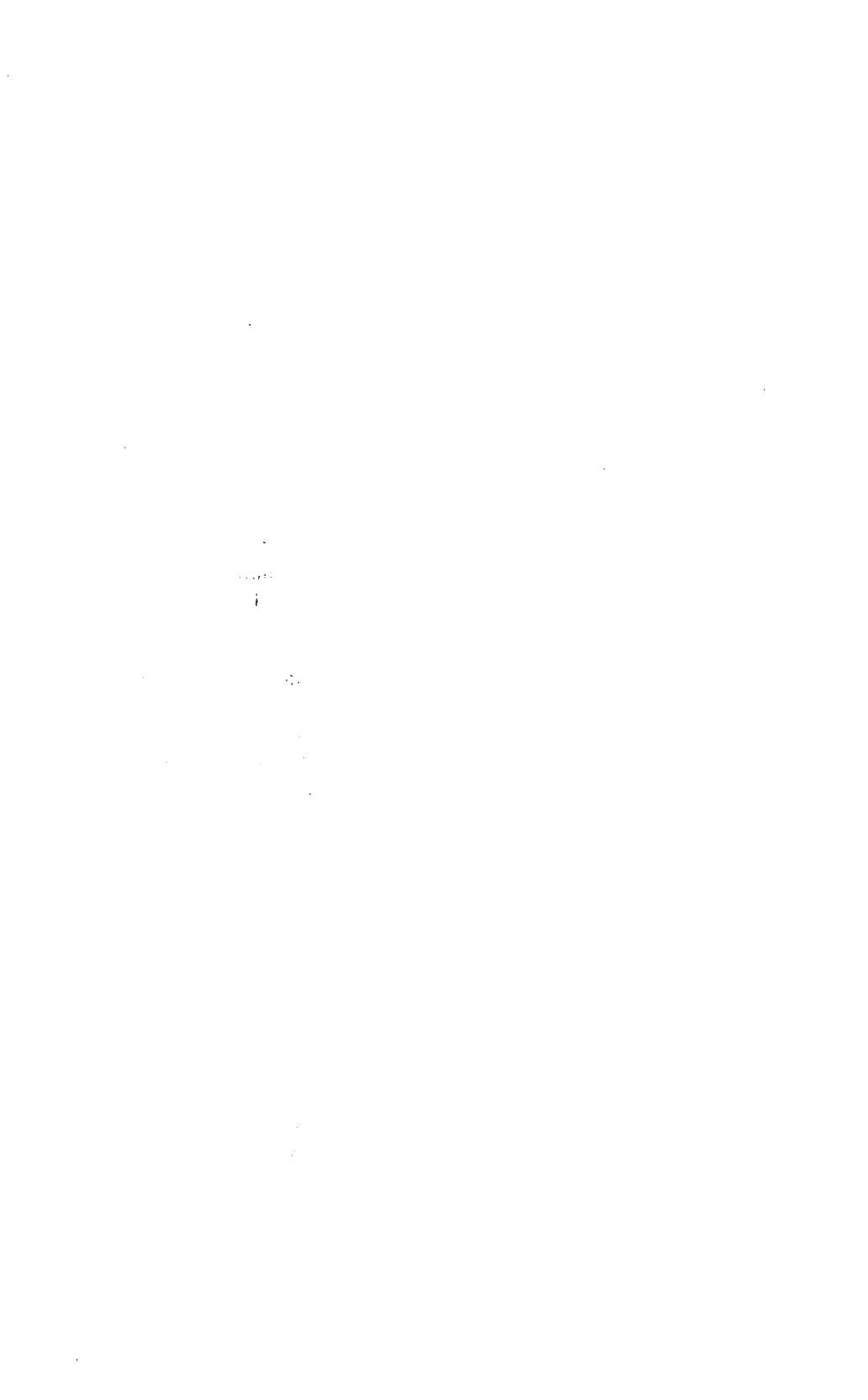
Very respectfully,

FELIX M. ROXAS, *President.*
P. G. McDONNELL, *Member.*
A. W. HASTINGS, *Member.*
W. H. ROBINSON, *Member.*
TOMÁS ALFONSO, *Member.*
TIMOTEO PAEZ, *Member.*

His Excellency

The GOVERNOR-GENERAL OF THE PHILIPPINE ISLANDS,

Manila, P. I.



ANNUAL REPORT OF THE MUNICIPAL BOARD OF THE CITY OF MANILA.

OFFICE OF THE SECRETARY.

The personnel of the Board remained the same throughout the fiscal year, with the exception of changes in the elective members as hereinafter noted. The president availed himself of thirty-four days' accrued leave during the months of March and April, 1910, during which period Member McDonnell acted as president, and also took over the committee work of the president.

During the year, the committees were constituted as follows:

Committee.	Member.	Committee.	Member.
Law	Roxas.	Sewer and waterworks construction.	Roxas.
Engineering and public works.....	McDonnell.	Health	Do.
Police	Do.	Markets and mataderos	Hastings.
Education	Roxas.	Expropriation	Roxas.
Fire	McDonnell.	Sanitation and transportation	Hastings.
Electrical installation and illumination.	Do.	Licenses	Do.
Finance and taxation	Hastings.		

The Board held 298 regular sessions and 35 special sessions during the year, and acted on 4,270 items of municipal business, in addition to a mass of routine matters, such as requisitions, permissions for processions, etc.

The number of communications received during the year was 6,638, as against 5,839 for the preceding year. The number of communications sent out was 7,800, as against 6,703 for the preceding year.

Nine new leases were executed and 12 leases renewed, a list of which follows:

Property rented by the city.

Location.	Purpose.	Remarks.
Building, 99 Padre Herrera, Tondo	School	Renewal
Building, 688 Cervantes, San Lazaro	do	Do.
Building, 4 Alejandro VI, Sampaloc	do	Do.
Building, 118 Real Ermita	do	Do.
Building, 25 Peñafrancia, Paco	do	Do.
Building, 340 Nueva, Malate	do	Do.
Building, 254 San Sebastian	do	Do.
Building, 146 Singalong	do	Do.
Building, 146 Singalong	do	Do.
Building, 40 Santa Maria, Santa Ana	do	Do.
Building, 14 Santa Marcelino	do	Do.
Building, 47 Trece de Agosto, Paco	do	Do.
Building, 116 Misericordia, Santa Cruz	do	New.
Building, 134 Beaterio, Intramuros	do	Do.
Building, 270 Beata, Pandacan	do	Do.
Land at Sampaloc	Midden shed	Do.
Land at Pandacan	Storage yard	Do.
Do	do	Do.
Land at San Juan del Monte	do	Do.
Land at San Miguel	do	Do.
Land, Calle Gagalangin	Market site	Renewal.

Property rented from the city.

Location.	Purpose.	Remarks.
Building, 142 Anloague	Offices	New.
Portion of Anda Market	Cinematograph	Do.
Building, 21 San Fernando	Residence	Renewal.
Land alongside San Agustin Bridge	Storage	New.
Land in Malate	Distilling plant, U. S. Q. M. D.	Renewal.

Twenty-one contracts were entered into during the year, a list of which follows:

Date.	Contractor.	For—	Amount.
1909.			
July 8.	Atlantic, Gulf and Pacific Co.	Steel hose tower	P9,470.00
July 8.	F. L. Strong	Gate valves, air valves	7,434.70
July 13.	H. W. Peabody & Co.	Fire hydrants	18,727.50
July 23.	Manila Electric Railroad and Light Co.	Power for sewer pump station	(^a)
Aug. 7.	Castle Bros., Wolf & Sons.	Steel steam launch	21,547.71
Sept. 7.	M. X. C. Weinberger	Concrete vault	2,570.00
Sept. 8.	R. Aguado	Sand and gravel, 6 months	4,920.00
Sept. 24.	Manila Hotel Company	Exchange of land	
Oct. 21.	Findlay & Co.	Manhole covers and frames	8,183.14
Nov. 10.	M. Coromina	Removal of dredged material	(^b)
Nov. 30.	Various persons	Removal of their houses	165.00
Dec. 16.	San Nicolas Iron Works	Two portable steel tanks	3,300.00
1910.			
Jan. 7.	Atlantic, Gulf and Pacific Co.	Distribution system, water supply	226,990.00
Mar. 14.	do.	Platform and ladder for gatehouse	262.00
Apr. 9.	F. Quiogue	Burial of pauper dead	(^a)
Apr. 22.	F. L. Aguado	Sand and gravel, 6 months	5,112.00
Apr. 25.	R. Perez	Ipil paving blocks	2,700.00
May 9.	Rita de Ocampo	Agreement to convey land	
May 21.	City of Manila	Pail system, etc., military government	(^a)
June 9.	Juan Galmes	Feeding city prisoners	(^c)
June 22.	Atlantic, Gulf and Pacific Co.	Canonigo Bridge	30,450.00

^a Unit prices. ^b 31 centavos per cubic meter. ^c 60 centavos per person per day.

Sixteen ordinances were enacted, of which a list follows:

No.	Object.	Date of enactment.
118	Appropriation for traveling expenses of city electrician	July 2, 1909
119	Amending section 487 of the Revised Ordinances	Do.
120	Amending section 183 of the Revised Ordinances	July 12, 1909
121	Amending section 122 of the Revised Ordinances	July 19, 1909
122	Amending section 231 of the Revised Ordinances	Aug. 16, 1909
123	Appropriation for fiscal year 1910	Aug. 30, 1909
124	Amending section 107 of the Revised Ordinances	Sept. 21, 1909
125	Regulating use of sewers and drains	Sept. 27, 1909
126	Amending section 125 of the Revised Ordinances	Oct. 11, 1909
127	Amending section 93 of the Revised Ordinances	Oct. 28, 1909
128	Governing installation and operation of steam boilers	Dec. 14, 1909
129	Regulating conduct of carnival merrymakers	Feb. 3, 1910
130	Regulating operation, use, and speed of motor vehicles	Mar. 17, 1910
131	Additional appropriation for department of schools	Mar. 29, 1910
132	Amending sections 312 and 313 of the Revised Ordinances	Apr. 2, 1910
133	Appropriation for sanitary improvements	Apr. 18, 1910

During the year the Municipal Board record indexes for the years 1902 to 1908, inclusive, were written up and transferred from the cards to legal-cap paper and bound in book form. These books represent 66 boxes of record-index cards, and not only do away with a great many card files

but eliminate the additional cost of new card-index boxes for the current index, besides greatly simplifying the work of record searching. In case of fire or other emergency, one man could save the entire index covering a period of several years' time.

The work of systematizing the record of the purchase and sale of city property was also undertaken and carried out successfully. This office is now in possession of a complete record of all city property for which deeds have been executed, together with a thorough index for same, arranged alphabetically by names and also by streets and districts, so that it is no longer necessary to know the name of the party or parties from whom the property was originally purchased in order to find the title papers in any given case. The deeds are all numbered and filed in numerical order in the vaults of the disbursing officer of the Municipal Board. The record of retained copies of deeds for property sold is compiled in the same manner as that of property purchased.

A list of property "acquired" and property "sold" during the present fiscal year follows:

Property acquired by the city during the year.

Acquired from—	Location.	Area.	Cost.	To be used for—
		<i>Sq. m.</i>		
Harry D. Kneeder _____	Lot 11, block 11, Malate.	25.53	(*)	Widening street.
Arturo Lafuente _____	Calle Lipa, Sampaloc.	248.24	P 555.64	Do.
A. D. Gibbs _____	Calle Divisoria, Ermita.	197.16	(*)	Do.
D. Tuason _____	Santa Mesa, Sampaloc.	451.71	170.49	Do.
Henri Blum _____	Palomar Island, Tondo.	8,171.67	Gratis.	Extending street.
Candida Fernandez _____	Lot 30, block 65, 314 Nozaleda, Ermita.	87.43	524.58	Widening street.
Gregorio Bartolomé _____	Lot 31, block 4, Peñafrancia, Paco.	952.72	924.14	Street purposes.
Esperanza Tuason _____	Balic Balic, Sampaloc.	437.00	Exchange.	Straightening estero.
Pio Trinidad and Juan Otaiza _____	La Torre, Tondo.	21.57	64.71	Widening street.
Flaviano Abreu _____	Lot 2, block 4, San Miguel.	32.21	96.63	Do.
Victoria Butler _____	Santo Cristo, San Nicolas.	192.323	5,319.06	Widening and straightening street.
Tuason Estate _____	Santa Mesa Heights.	44,813.23	Gratis.	Street purposes.
Fabian de los Santos _____	Calle Herran _____	441.40	Gratis.	Do.
Do _____	do _____	119.685	478.74	Extending and widening street.
Rafaela Casas y del Rosario and Fernando Castillo y del Rosario.	Lot 4, block 32, San Nicolas.	7.365	58.92	Widening street.
H. D. Kneeder _____	Padre Faura, Ermita.	125.75	(*)	Do.
Manila Hotel Company _____	Ermita _____	20,572.96	Exchange.	
P. G. McDonnell _____	Isaac Peral _____	20.54	(*)	Street purposes.
Filomena Rocas _____	Part lots 3 and 4, block 65, Calle Jolo, Binondo.	151.10	18,000.00	Widening street.
Antonio Rivas _____	Part lot 11, block 82, Calle Ylaya, San Nicolas.	36.08	288.24	Do
A. Debrunner _____	Peñafrancia, Paco	639.28	958.92	Do
Certificate of title _____	Herran Market _____	10,332.00		
Estanislawa M. Paterno _____	Lot 13, block 60, Santa Cruz.	42.78	171.78	Do

* In exchange for certain improvements made by the city.

Property acquired by the city during the year—Continued.

Acquired from—	Location.	Area.	Cost.	To be used for—
Demetrio Tuason	Hacienda Santa Mesa and Dili-man.	<i>Sq. m.</i> 3,308.02	50.00	Road construc-tion.
Isidro Penavente	Peñafrancia, Paco	24.52	42.91	Widening street.
Policarpo Chung-Tulco	Almanza, Santa Cruz.	249.82	1,019.68	Do.
Francisco J. Gonzales	Lot 60, block 4, Real, Paco.	13.43	20.15	Do.
Enrique Brias for Carmen Ayala de Roxas.	Dulumbayan, Santa Cruz.	219.72	7,100.00	Do.
Estate of John Kernan	Lot 3, block 62, Nozaleda, Ermita.	29.58	Gratis.	Do.
Feliciano Quiogue et al	Lots 1 and 5, block 10, Soler, Binondo.	98.00	588.00	Do.
Flaviano Abreu	Lot 2, block 4, San Rafael, San Miguel.	128.26	384.78	Do.
Ed. W. Blair	Lot 33, block 65, Herran, Ermita.	34.00	136.00	Do.
Hon. Benito Legarda, by Ramon S. Gavito.	Guipit, Sampaloc.	2,650.84	Gratis.	Extending and widening street.
Compañia General de Tabacos de Filipinas.	Canónigo, Paco	1,307.00	Gratis.	Do.
Congregación de las Hijas de la Caridad.	do	839.56	1,716.32	Widening street.
Hilaria Mascallado	Lot 2, block 13, Union, Paco.	60.80	72.96	Do.
Oliver & Trill	Lot 5, block 47, Divisoria, Ermita.	265.81	2,192.88	Do.
Julia Francisco	Rizal Province	3,856.00	528.80	Right of way for pipe line.
William Ahern	Lots 1 and 2, block 34, San José, Ermita.	794.25	8,500.00	Entrance to Cavite Boulevard.
Francisco J. Gonzales	Lot 64, block 3, Canónigo, Paco.	2,492.91	498.58	Extending street
Ramon Lagdameo et al	Calle Grey, Ermita.	78.46	Gratis.	Straightening and widening street.
Manuel Barredo	Lot 42, block 11, Tennessee, Malate	273.83	672.48	Opening street.
Justo Alonso	Lot 47, block 11, Tennessee, Malate.	1,101.62	2,203.24	Do.
José Claro Arquiza	Calle Grey, Ermita.	674.64	Gratis.	Do.
Tuason & Sampedro	Lot 16, block 61, Comillas, Ermita.	195.48	Gratis.	Do.
Anastasia Santos	Lot 16, block 61, Comillas, Ermita.	21.38	85.52	Widening street.
Fortunata Arcilla Anunciacion	Lot 5, block 43, Santa Maria, Tondo	107.25	451.30	Do.
Sixto Ciria Cruz	Pandacan	485.29	194.12	Pipe line, right of way.
Josefa Cembrano y Ker	do	291.80	233.44	Do.
Gibbs & Gale	Lot 4, block 31, Ermita.	31.01	372.12	Street purposes.
Ramon R. Papa and José del Castillo.	Concepción, Arroceros.	575.63	10,058.82	City shop property.
Maria Concepción de Icaza	Block 3, Pandacan.	747.80	299.52	Pipe line, right of way.
Remedios Salcedo	Lot 7, block 5, San Miguel.	9,062.51	8,656.72	Extending street.
Leopoldo Kahn, for Raphael Levy	San Miguel	518.00	12,649.60	Do.
Sergia Santiago et al	Lots 7 and 30, blocks 1 and 5, San Miguel.	1,401.90	700.95	Do.
Teodoro M. Beach	Lot 4, block 43, Tondo.	193.62	1,526.56	Street purposes.
	Lot 1, block 35, Looban, Paco.	3,066.00	3,066.00	Market site.

* ₱5,000 paid. Balance to be paid during the fiscal year 1911.

Property sold by the city.

Sold to—	Location.	Area.	Price.
		<i>Sq. m.</i>	
Ruperto Anido.....	Calle Soler.....	56.64	₱235.72
Francisco Saez Cotiongco.....	Aceyteros and Tabora.....	380.81	30,160.00
Francisco Villamil y Saavedra.....	Calle Dakota.....	557.36	2,271.08
"La Germinal".....	Marques de Comillas.....	21.56	129.00
Clarence L. Fyffe.....	Calle D.....	1,051.45	4,464.12
Vicente Solis.....	Calle Sande, Tondo.....	Building.	250.00
Mariano V. del Rosario.....	Calle Herran, Malate.....	450.00	900.00
Insular Government.....	River walls adjoining property on Pasig River below Ayala Bridge.....		206,784.77
Ambrosio Guzman.....	Lot 56, block 45, Morga, Tondo.....	27.85	55.70
Felipa P. Alberto.....	Lots 9 and 10, block 64, San Nicolas.....	46.14	1,476.48
Santiago Barcelona.....	Calle Morga, Tondo.....	549.60	1,099.20
Burke & Young.....	Lot 25, block 39, Calle Morga, Tondo.....	405.60	907.20
Sra. Paula Calderon y Yateo, et al.....	San Luis, Ermita.....	12.285	196.56

There was no change made in the contracts with the San Juan de Dios and St. Paul's hospitals for the care and treatment of indigent sick and injured. Below is a list by months of the amounts paid the above-named hospitals, the contracts providing for a maximum of 50 patients per day at each hospital, at ₱1.40 per patient per day:

Cost of caring for indigent sick and injured for the fiscal year 1910.

Month.	San Juan de Dios Hospital.		St. Paul's Hospital.	
	Number of patients.	Amount.	Number of patients.	Amount.
1909.				
July.....	1,550	₱2,170.00	1,476	₱2,066.40
August.....	1,550	2,170.00	1,550	2,170.00
September.....	1,500	2,100.00	1,497	2,095.00
October.....	1,550	2,170.00	1,550	2,170.00
November.....	1,500	2,100.00	1,500	2,100.00
December.....	1,550	2,170.00	1,550	2,170.00
1910.				
January.....	1,550	2,170.00	1,550	2,170.00
February.....	1,400	1,960.00	1,400	1,960.00
March.....	1,550	2,170.00	1,527	2,137.80
April.....	1,500	2,100.00	1,500	2,100.00
May.....	1,550	2,170.00	1,550	2,170.00
June.....	1,500	2,100.00	1,490	2,086.00

Total cost for the year:		
San Juan de Dios Hospital.....		₱25,550
St. Paul's Hospital.....		25,946
Total cost.....		50,946

From the above figures it will be seen that the maximum number of patients were treated in the San Juan de Dios Hospital, but slightly less than said number in the St. Paul's Hospital.

The number of juvenile offenders committed during the year to the reformatory of the Hospicio de San Jose shows a slight increase over last year, 97 having been admitted this year as against 93 for last year. The cost of maintenance was slightly less than the preceding year. The following statement shows the number of persons admitted each month

and the cost of this service per month, payment being made at the rate of 40 centavos per patient per day:

Admitted to the reformatory of the Hospicio de San Jose.

Month.	Males.	Fe- males.	Cost.	Month.	Males.	Fe- males.	Cost.
1909.				1910.			
July.....	8	0	₱1,236.00	January.....	4	1	₱950.40
August.....	11	2	1,399.80	February.....	12	1	849.60
September.....	3	0	1,052.40	March.....	6	3	1,070.40
October.....	10	0	1,091.20	April.....	7	3	1,022.40
November.....	2	1	992.80	May.....	8	0	1,068.40
December.....	6	0	1,004.00	June.....	9	0	997.60

vote of 6,024. The population of Manila being calculated at 234,000, it appears that only 2.57 per cent of the population voted.

In the First Assembly District Dominador Gomez received a plurality of the votes cast for Member of the Assembly, and Timoteo Paez received a plurality of the votes cast for member of the Municipal Board.

In the Second Assembly District Pablo Ocampo received a plurality of the votes cast for member of the Assembly, and Tomas Alfonso a plurality of the votes cast for member of the Municipal Board.

The result of the election for member of the Municipal Board in the First District was made the subject of a contest in the Court of First Instance, the court rendering a decision in favor of Mr. Paez.

The following statement shows the number of ballots cast in each precinct at this election:

Precinct.	Ballots cast.	Precinct.	Ballots cast.
1.....	227	19.....	170
2.....	129	20.....	146
3.....	252	21.....	185
4.....	227	22.....	192
5.....	165	23.....	120
6.....	168	24.....	294
7.....	148	25.....	117
8.....	155	26.....	85
9.....	246	27.....	146
10.....	219	28.....	157
11.....	153	29.....	187
12.....	135	30.....	136
13.....	196	31.....	25
14.....	66	32.....	321
15.....	123	33.....	144
16.....	93	34.....	267
		35.....	92
Total, First District.....	2,704	36.....	115
17.....	282	Total, Second District.....	3,320
18.....	139		

The secretary's office collected, for certified copies of records, ₱93.50.

DISBURSING OFFICE, CITY OF MANILA.

FISCAL OPERATIONS OF THE CITY OF MANILA.

The close of the fiscal year again finds the finances of the city in a reasonably satisfactory condition.

The city has collected an income of ₱3,358,701.55, an increase over the previous fiscal year's collections of ₱224,933.31, and may be accounted for, in the main, by the increase in amounts collected for real-estate tax, municipal internal revenue, road and bridge cedulas, municipal court fines, water rents, market and slaughterhouse receipts. Including the contribution of the Insular Government, the total income of the city for the year is ₱4,608,701.55.

During the year the city has expended for purposes of administration

₱2,025,794.47; for operation, ₱815,002.13; for the maintenance or upkeep of equipment, roads, bridges, and parks, ₱738,008.56; has purchased new equipment to the value of ₱108,809.12; expended in construction of new roads and bridges, ₱186,167.44; for buildings and schoolhouses, ₱41,270.22; and ₱1,211,660.41 (₱10,067.90 from city revenue and ₱1,201,592.51 from bond-issue funds) for construction of new waterworks and sewerage systems. The city has placed in reserve toward redemption of the sewer and waterworks bonds ₱154,960; paid ₱320,150 as interest on sewer and waterworks construction bonds; paid ₱150,000 of the debt incurred on account of the Luneta Extension; has ₱49,792.49 in surplus supplies purchased during the year on hand; and has a cash balance in the Treasury of ₱510,332.89, exclusive of the proceeds of bond issues and reserves. Of this latter amount, ₱80,071.09 only is available for expenditure for administrative purposes, the remainder being appropriated for public works and sanitary improvements.

So far as known every liability for services rendered or supplies furnished has been brought into account, and the city begins the fiscal year 1911 with but ₱1,163.57 in outstanding obligations.

SCHEDULE A.—General balance sheet, city of Manila, June 30, 1910.

ASSETS.		LIABILITIES.	
Fixed assets:	Real estate—	Bonded debt:	₱8,000,000.00
	Expenditure from Insular loan—	Sewer and waterworks bonds	
	Expenditure from revenue and	Current liabilities:	₱50,000.00
	otherwise acquired—	Balance due Insular Government on Luneta Extension loan	1,163.57
	₱5,941,566.86	Accounts payable (appropriated surplus)	51,163.57
	59,544.65		
	59,495.43	Total liabilities	8,051,163.57
	379,814.78		
Buildings and structures		Surplus:	
School buildings		Sinking and reserve funds	560,912.75
Streets, roads, and bridges		Supplies (unexpended)	89,012.31
Sewer and waterworks—		Banco Español-Filipino bank stock	18,800.00
Expenditures from bond fund	7,599,172.08	Accounts receivable	68,449.90
Expenditures from revenue	23,087.21	Premiums on sale of sewer and waterworks bonds	470,969.82
Parts and public grounds—		Revenue account—	
Expenditures from Insular loan	15,000.00	Current appropriations—	
Expenditures from revenue	92,256.64	Cash	₱428,229.88
Equipment—		Less accounts payable	1,163.57
Acquired from bond fund	10,285.57	Available for appropriation	507,137.40
Acquired from revenues	1,734,523.43	Principal account, being fixed assets acquired from revenue or brought into account	8,265,289.00
Sinking and reserve fund assets:			
Sewer and waterworks bond sinking fund—			
Cash	(17,919.17)		
Investments	546,000.00		
Insurance fund—			
Cash	2,031.92		
Investments	30,800.00		
Special funds:			
Sewer and waterworks bond fund (cash)	861,512.17		
Luneta Extension loan (cash)	15,000.00		
Current assets:			
Banco Español-Filipino bank stock (94 shares)	18,800.00		
Supplies (unexpended)	89,012.31		
Accounts receivable (deferred payments on sale of real estate)	68,449.90		
Cash—			
Current appropriations	428,229.88		
Available for appropriation	80,071.09		
Total assets	18,031,734.75	Total	18,031,734.75

SCHEDULE B.

Statement of income, city of Manila, fiscal year ending June 30, 1910.

Revenues from taxation:

Land taxes	₱1,287,931.89	
Internal revenue	15,515.00	
Franchises	59,122.27	
Cedulas	87,603.00	
Cedulas, Act 1695.....	81,158.00	
Internal-revenue dividend	66,720.44	
Internal-revenue dividend, Act 1695.....	23,670.08	
		₱1,621,720.68

Miscellaneous:

Escheats		
Interest on bank deposits.....	32,366.22	
Dividends on Spanish-Filipino stock.....	1,316.00	
Miscellaneous	8.22	
		33,690.44

Receipts from operation:

Municipal Board (secretary's fees)	93.50	
Miscellaneous	217.10	
		310.60

Law department:

Fees, fines, and court costs.....	80,398.45	
Justice of the peace fees.....	4,840.60	
Sheriff's fees	10,427.08	
Register of deeds fees.....	13,622.84	
City attorney fees	2.00	
Miscellaneous	10.70	
		109,301.67

Fire department:

Electrician's fees	6,977.10	
Miscellaneous	131.34	
		7,108.44

Police department:

Municipal licenses	243,656.33	
Miscellaneous	167.86	
		243,824.19

Engineering and public works:

Boiler inspection fees	2,780.00	
Building permits	17,524.01	
Water rents	298,306.87	
Miscellaneous	1,349.25	
		319,960.13

Department assessments and collections:

Live stock registration	17,753.00	
Live stock transfers		
Vehicle equipment	1,042.40	
Weights and measures	8,959.85	
		27,755.25

Department sanitation and transportation:

Burial permits	4,409.20	
Cemetery	20,700.50	
Pound receipts	5,542.67	
Pail system	70,181.63	

SCHEDULE B—Continued.

Statement of income, city of Manila, fiscal year ending June 30, 1910—Continued.

Department sanitation and transportation—Cont'd.

Vault cleaning	₱29,953.00	
Slaughterhouse	190,257.42	
Markets	278,736.85	
Transportation furnished	309,321.56	
Dead animals	4,875.00	
Sale of sacks	815.00	
Transportation of meat	10,589.36	
Miscellaneous	1,889.40	
		₱927,271.59

Bridges, esteros, parks, and streets fund, Act No.

1727:

Sale and rental of real estate	63,252.01	
Rent of telephone poles	2,439.25	
		65,691.26

Total		3,356,634.25
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Insurance fund, interest	2,067.30	
		2,067.30

Total income for fiscal year 1910		3,358,701.55
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SCHEDULE C.

Expenditures.

Municipal Board:

Administration—

Salaries and wages	₱82,598.02
Expenses of personnel	1,269.19
Transportation	464.60
Office expenses	7,915.11
Incidental expenses	171,615.38

Maintenance—

Buildings	195.53
Vehicles (bicycles)	10.00
Small tools	90.90
Furniture and fixtures	1,461.79

Bad debts, section 50, Act 1792	340.72
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Equipment—

Transportation equipment (bicycle)	224.40
Furniture and fixtures	600.21
Tools and implements	5.87

₱266,791.72

Law department:

Administration—

Salaries and wages	98,579.59
Expenses of personnel	133.90
Office expenses	9,755.35
Incidental expenses	2,081.39

SCHEDULE C—Continued.

Expenditures—Continued.

Law department—Continued.

Maintenance—

Buildings and structures	₱145.64
Furniture and fixtures.....	1,362.46
Scientific equipment	1.50

Equipment—

Tools and implements.....	8.43
Furniture and fixtures	3,332.55

₱115,400.81

Fire department:

Administration—

Salaries and wages	237,088.64
Expenses of personnel.....	4,724.47
Transportation	23,505.04
Office expenses	6,985.17
Incidental expenses	5,852.86

Maintenance—

Buildings and structures	2,524.18
Fire and police alarm system.....	17,887.70
Launches	3.00
Fire apparatus	11,366.57
Stationary machinery	116.40
Tools and implements	5,022.78
Furniture and fixtures	3,042.39
Miscellaneous equipment	3.95

Equipment—

Fire-police alarm telegraph	863.78
Launches	(3.00)
Fire apparatus and horses.....	14,276.46
Tools and implements	4,902.14
Furniture and fixtures	(5,855.12)
Scientific instruments	821.35

333,128.76

Assessments and collections:

Administration	₱44,900.00
Tax refunds	83,307.89
	128,207.89

128,207.89

Police department:

Administration—

Salaries and wages	695,436.68
Expenses of personnel	7,093.96
Transportation	5,055.50
Office expenses	27,628.89
Rentals	2,400.00
Special service (secret).....	1,292.70
Incidental expenses	26,473.64

Maintenance—

Buildings and structures	7,451.07
Land transportation	30.60
Ordnance	48.28

SCHEDULE C—Continued.

Expenditures—Continued.

Police department—Continued.	
Maintenance—Continued.	
Tools and implements	₱283.03
Furniture and fixtures	2,104.42
Scientific implements	745.48
Equipment—	
Land transportation equipment.....	118.80
Ordnance	12.60
Tools and implements	133.30
Furniture and fixtures	579.09
Scientific instruments	23.21
	<hr/>
	₱776,911.25
Department of city schools:	
Administration—	
Salaries and wages	235,180.05
Expenses of personnel	551.85
Transportation	1,679.00
Office expenses	7,084.93
Rentals	38,858.00
Incidental expenses	2,621.42
Maintenance—	
Repairs, schoolhouses	902.97
Tools and implements	62.78
Furniture and fixtures	739.03
Equipment—	
Tools and implements.....	(59.30)
Furniture and fixtures	1,462.26
	<hr/>
	289,082.99
Engineering and public works:	
Administration—	
Salaries and wages	104,160.27
Expenses of personnel	466.06
Transportation	39.50
Office expenses	19,765.19
Incidental expenses	104,043.54
Operation (water supply)—	
Superintendence	26,903.80
Labor	20,029.60
Miscellaneous expense	23,255.90
Permanent improvements and equipment—	
Construction schoolhouses	54.31
Construction roads and bridges—	
Roads	₱38,649.18
Bridges	2,550.41
	<hr/>
	41,199.59
Additions to water system.....	10,067.90
Launches and scows.....	18,357.47
Land transportation equipment	(52.50)
Stationary machinery	(125.00)

SCHEDULE C—Continued.

Expenditures—Continued.

Engineering and public works—Continued.

Permanent improvements and equipment—Cont'd.

Tools and implements	₱13,627.66
Furniture and fixtures	39.22
Scientific instruments	530.52

Maintenance—

Buildings and structures	21,982.44
Streets and roads	212,613.57
Bridges	29,093.41

241,706.98

Esteros	10,989.32
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Water supply system and
sewers—

Waterworks system	30,822.20
Sewers	10,686.03

41,508.23

Launches, scows, and barges.....	27,487.26
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Land transportation equipment.....	131.50
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Sationary machinery	3,948.35
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Tools and implements	14,723.52
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Furniture and fixtures	668.60
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Scientific instruments	349.78
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₱745,859.01

Department of sanitation and transportation:

Operation—

Superintendence—

General office	20,148.86
Cemeteries	4,161.66
Transportation	14,331.40
Disposal of refuse.....	1,648.08
Disposal of night soil.....	9,350.93
Markets	3,217.63
City pound.....	895.00
Street cleaning	3,069.24
Street sprinkling	883.34

57,706.14

Labor—

Cemeteries	11,877.30
Do'	1,221.55
Disposal of refuse.....	23,349.80
Disposal of night soil.....	73,794.00
Transportation	195,928.25
Markets	19,405.20
City pound.....	832.80
Street cleaning	46,902.40
Street sprinkling'	9,419.50
Matadero	2,028.55
Miscellaneous	375.00

385,134.35

SCHEDULE C—Continued.

Expenditures—Continued.

Department of sanitation and transportation—Continued.

Operation—Continued.

Miscellaneous—

Forage	₱185,447.82
Fuel	4,904.16
Horseshoeing	7,429.02
Disinfectants	4,602.39
Rentals	7,384.03
Amount paid Internal Revenue for collection of receipts	35,000.00
Miscellaneous	57,163.12

₱301,930.54

Maintenance—

Buildings and structures	22,054.02
Maintenance of esteros	152.93
Maintenance of launches	637.96
Land transportation equipment	113,377.40
Tools and equipment	49,337.34
Furniture and fixtures	567.22
Scientific instruments	202.68
Parks and monuments	55,854.92

Equipment—

Launches and scows	(172.05)
Buildings and structures	549.33
Transportation equipment	51,728.45
Tools and implements	(8,740.36)
Furniture and fixtures	(197.51)
Scientific instruments	366.19

₱1,030,489.55

Public works and permanent improvements (from city revenue) :

Widening and straightening of streets, Act No. 1727	64,119.45
Widening Calle Jolo, Act No. 1727	17,127.71
Construction Tondo school building, Act No. 1727	5,570.04
Permanent street monuments, Ordinances Nos. 105 and 123	2,584.23
Remodeling bridges, Ordinance No. 105	2,209.19
Widening of Escolta Bridge, Ordinance No. 105	2,200.00
Construction hose-drying tower, Ordinances Nos. 105 and 123	9,500.00
Plumbing system, Luneta station, Ordinance No. 105, maintenance	2,500.00
Construction of vault, Ordinance No. 123	3,290.98
Purchase of motor fire engine, Ordinance No. 123	a 12,000.00

* Actual cost of the "Webb" automobile fire engine and hose wagon was ₱18,526.33. Of this amount ₱12,000.00 was paid from the appropriation noted and the balance, ₱8,526.33, from the current appropriation of the fire department for contingent expenses.

SCHEDULE C—Continued.

Expenditures—Continued.

Public works and permanent improvements (from city revenues)—Continued.

Purchase of land in Arroceros grounds, Ordinance No. 123	₱5,000.00
Reconstruction, Meisic school building, Ordinance No. 123	5,000.00
Reconstruction of general storehouse, Ordinance No. 123	7,000.00
Construction of two sewerage disposal stations, Ordinance No. 123	8,850.00
Bridges, esteros, parks, and streets fund, Act No. 1727—	

Permanent improvements—

Cementerio del Norte Road..	₱5,775.90
Parking glacis and moat....	31,165.45
Construction playground ..	4,966.35
Land for streets.....	11,275.81
Parking	1,590.34
	<hr/> 54,773.85

Maintenance—

Labor, street repairs.....	51,725.15
Dredging esteros	2,626.40
Parks	277.35
	<hr/> 54,628.90

109,402.75

Cedula road and bridge fund, Act 1695—

Permanent improvements—

Bridges	19,900.86
Extension of streets	24,628.92

44,529.78

Maintenance, repairs to paving..

14,368.57

14,368.57

₱315,252.70

Sanitary improvements:

Drainage of low areas.....	4,092.37
Sewer connections, public buildings, Ordinance No. 123, maintenance	3,000.00
Removal and reerection nipa houses, Ordinance No. 123, administration	5,746.44
Sanitary improvements, Ordinance No. 133, administration	33,449.92

46,288.73

Fixed charges:

Interest on sewer and waterworks bonds.....	320,150.00
Annual payment to sewer and waterworks bond sinking fund	154,960.00
Fourth, fifth, and sixth annual payments on Lu-neta Extension loan, Act No. 1360.....	150,000.00

625,110.00

SCHEDULE C—Continued.

Expenditures—Continued.

Capital operation:

Insurance fund, Act No. 1706.....	₱10,800.00	
Stores and supplies	49,792.49	
		₱60,592.49

Miscellaneous:

Interest on erroneously collected taxes.....	26,658.50	
Cholera emergency fund	8,957.50	
		35,616.00

Total expenditures, city of Manila.....		4,768,731.90
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SCHEDULE D.

*Inventory of nonexpendable property (equipment) owned by the city of Manila,
June 30, 1910, listed by departments.*

Municipal Board:

Secretary's office	₱12,724.34	
Disbursing office	6,882.94	
General storehouse	915.15	
		₱20,522.43

Law department:

City attorney's office.....	15,719.80	
Prosecuting attorney's office.....	8,662.89	
Court of First Instance.....	13,903.56	
Sheriff's office	1,893.96	
Municipal court	3,139.88	
Justice of peace	456.24	
Register of deeds	1,518.24	
		45,294.57

Fire department	507,509.77
Police department	106,145.36
Department of city schools.....	87,780.51
Department of engineering and public works.....	324,547.70
Department of sanitation and transportation.....	642,723.09
Department of sewer and waterworks construction.....	10,285.57

Total	1,744,809.00
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SCHEDULE E.

Inventory of real estate owned by the city of Manila June 30, 1910, summarized by districts.

District.	Land.	Improve-ments.	Total.
Intramuros.....	₱275,376.00	₱608,175.00	₱883,551.00
Binondo.....	233,064.00	149,820.00	382,884.00
San Nicolas.....	417,133.00	426,248.00	843,381.00
Santa Cruz.....	165,926.00	398,086.00	564,012.00
Quiapo.....	38,249.00	63,780.00	102,029.00
San Miguel.....	12,568.00	7,882.00	20,400.00
Sampaloc.....	100,000.00	48,103.00	148,103.00
Tondo.....	115,611.00	237,092.00	352,703.00
Ermita.....	146,359.00	164,756.00	311,115.00
Malate.....	208,538.00	40,256.00	248,794.00
Paco.....	52,262.00	141,242.00	193,504.00
Pandacan.....		7,443.00	7,443.00
Santa Ana.....		1,536.00	1,536.00
Luneta Extension.....	997,877.86		997,877.86
Botanical Gardens.....	884,234.00		884,234.00
Total.....	3,647,197.86	2,294,369.00	5,941,566.86

NOTE.—The values of city of Manila real estate as given in above tabulation are those assigned in an inventory made by the city assessor and collector with the exception of the value allotted to the Luneta Extension, which tract has not been declared by the city and therefore not yet appraised by the city assessor.

The original area of the Luneta Extension reclaimed land, according to record of the measurements made by the city engineer, was 285,780 square meters. From this area is deducted the parcels disposed of as follows:

	Square meters.
Army and Navy Club site.....	12,665.46
Elks Club site.....	5,543.07
Manila Hotel site.....	20,572.00
	38,780.53

After deducting the area of the parcels disposed of there remain 246,999.47 square meters, and for the purposes of this statement the value of ₱4.04 per square meter has been employed, as this was the selling price of portions sold.

The water-supply pumping station, Deposito, and other property of the old waterworks system, located outside of the city limits, has not been considered as city property, the same being held in trust by the city for the benefit of the Carriedo water system.

SCHEDULE F.

SPECIAL ACCOUNTS.

The accounts of the department of sewer and waterworks construction, the sewer and waterworks sinking fund, and the Luneta Extension loan are stated separately in this report for the reason that transactions pertaining to these accounts do not affect current expense appropriations, and the provisions of Act No. 183 (the Manila Charter) whereby the Insular Government contributes 30 per cent of the appropriations does not affect these funds.

SEWER AND WATERWORKS CONSTRUCTION.

For the purpose of furnishing the city of Manila with an adequate water supply and for the construction of sewerage and drainage system the Insular Government incurred on behalf of the city of Manila a bonded debt of ₱8,000,000 (\$4,000,000 United States currency). Authority for the issuing of these bonds is contained in section 70, Act of July 1, 1902, of the Congress of the United States. The bonds issued are known as thirty-year 4 per cent bonds, and the first series of ₱2,000,000 was sold on June 1, 1905, the second series of ₱4,000,000 worth of bonds was sold the 2d of January, 1907, while the third series, completing the issue, was sold May 17, 1909. The operations of the fund so acquired are as follows:

THE ACCOUNT.

	Debit.	Credit.
By bonds issued, first series.....		₱2,000,000.00
By premium on first series.....		191,250.00
By bonds issued, second series.....		4,000,000.00
By premium on second series.....		234,010.70
By bonds issued, third series.....		2,000,000.00
By premium on third series.....		45,709.12
To expenditures for construction:		
Fiscal year 1905.....	₱5,689.04	
Fiscal year 1906.....	595,533.93	
Fiscal year 1907.....	2,114,978.33	
Fiscal year 1908.....	2,235,157.83	
Fiscal year 1909.....	1,456,506.01	
Fiscal year 1910.....	1,201,592.51	
To balance in treasury June 30, 1910.....	826,512.17	
To cash in hands of R. C. Baldwin, city disbursing officer	35,000.00	
	<hr/>	<hr/>
	8,470,969.82	8,470,969.82

SCHEDULE G.

Sewer and waterworks bonds sinking fund.

Balance June 30, 1909:

	Debit.	Credit.
Cash—		
In treasury.....	₱148,115.92	
In hands of other officers.....	600.00	
	₱148,715.92	
Investments—		
Manila sewer and waterworks bonds—		
First series.....	₱61,586.66	
Second series.....	102,459.72	
Third series.....	51,445.82	
	215,492.20	
		₱304,208.12

Income fiscal year 1910:

By appropriation.....		₱154,960.00
Interest on investments—		
First series sewer and waterworks bonds—		
Gross interest receipts.....	2,400.00	
Less amortization of premium paid at purchase.....	1,200.00	
Less accrued interest charged to investment.....	386.66	
	1,586.66	
		₱813.34
Second series sewer and waterworks bonds—		
Gross interest receipts.....	4,000.00	
Less amortization of premium paid at purchase.....	1,937.50	
Less accrued interest charged to investment.....	522.22	
	2,459.72	
		1,540.28
Third series sewer and waterworks bonds—		
Gross interest receipts.....	2,000.00	
Less amortization of premium paid at purchase.....	1,062.50	

Less accrued interest charged to investment.....	383.32	1,445.82	554.18
Public works bonds—			
Gross interest receipts.....		5,861.33	
Less amortization of premium		1,680.00	
		4,181.33	
		7,089.13	
		1,823.58	
Interest on bank deposits.....			163,872.71
Balance June 30, 1910:			
Cash—			
In treasury.....	(21,879.17)		
In hands of other officers.....	3,960.00	(17,919.17)	
Investments—			
Sewer and waterworks, first series	60,000.00		
Sewer and waterworks, second series.....	100,000.00		
Sewer and waterworks, third series.....	50,000.00		
Public works bonds	336,000.00	546,000.00	
			\$528,080.83
			528,080.83

SCHEDULE H.

Luneta Extension account.

The Insular Government loaned to the city of Manila, under the provisions of Act No. 1360, the sum of ₱350,000, repayable in seven annual installments to commence with the fiscal year 1907. Of this sum, ₱335,000 has been expended, for the most part, in reclaiming from Manila Bay a section of beach lying off the Luneta in the district of Ermita, and the land so made (285,780 square meters) is known as the "Luneta Extension."

The installments on the return of the loan for the fiscal years 1907, 1908, 1909, 1910, 1911, and 1912 have been paid, leaving a balance of ₱50,000 to be repaid. Of the loan there remains ₱15,000 unexpended.

THE ACCOUNT.		Debit.	Credit.
By loan from Insular Government, Act No. 1360			₱350,000.00
To expenditures:			
Fiscal year 1906.....	₱260,020.08		
Fiscal year 1907.....	49,009.03		
Fiscal year 1908.....	0.00		
Fiscal year 1909.....	15,000.00		
Fiscal year 1910.....	10,970.89		
Balance unexpended	15,000.00		
		350,000.00	350,000.00

SCHEDULE I.

City of Manila insurance fund (Act No. 1706).

The insurance fund of the city of Manila was created by Act No. 1706, which provided for a continuing annual appropriation of ₱10,000 until the fund with its increment should amount to ₱100,000. This fund to be available as might be required, to repair, reconstruct, or replace buildings and other property of the government of the city of Manila which shall have been damaged or destroyed by earthquake, fire, lightning, water, or wind.

THE ACCOUNT.		Debit.	Credit.
Balance June 30, 1909:			
Cash—			
In treasury	₱106.62		
In hands other officers.....	658.00		
	₱764.62		
Investments—			
Banco Español-Filipino			
stock	18,800.00		
Fixed deposits	1,200.00		
	20,800.00		
			₱20,764.62
Income fiscal year 1910:			
By continuing annual appropriation	10,000.00		
Interest on investments—			
Dividends on bank stock.....	1,880.00		
Interest on bank deposits.....	39.30		
Interest, public works bonds..	208.00		
Less amortization of pre-			
mium	60.00		
	148.00	148.00	
			12,067.30

SCHEDULE I—Continued.

City of Manila insurance fund (Act No. 1706)—Continued.

Balance June 30, 1910:	Debit.	Credit.
Cash—		
In treasury	₱971.92	
In hands other officers.....	1,060.00	
	<u>₱2,031.92</u>	
Investments—		
Banco Español-Filipino		
stock	18,800.00	
Public works bonds.....	12,000.00	
	<u>30,800.00</u>	
	<u>₱32,831.92</u>	
		<u>32,831.92 ₱32,831.92</u>

SCHEDULE J.

City of Manila fund (available for appropriations).

Balance June 30, 1909:	Debit.	Credit.
Account in treasury.....	₱89,025.16	
In hands of collecting officer.....	0.00	
		<u>₱89,025.16</u>
By revenue		1,655,411.12
By reversion of unexpended appropriations.....		65,337.37
By Insular Government Act 1765, 30 per cent of expenditures		1,250,000.00
By payment from Insular Government, Pasig River frontage		206,784.77
To appropriations fiscal year 1910:		
Municipal Board	₱252,000.00	
Law	34,100.00	
Fire	328,800.00	
Police	550,000.00	
City schools	289,650.00	
Engineering and public works.....	427,648.00	
Sanitation and transportation.....	50,000.00	
Assessments and collections.....	105,900.00	
Bridges, esteros, parks, and streets....	50,000.00	
Cedula road and bridge fund, No. 1695	104,828.08	
Fixed charges	625,110.00	
Insurance fund	10,000.00	
Interest on taxes erroneously collected	26,658.50	
Public works and permanent improvements	47,350.00	
Sanitary improvements.....	229,784.77	
	<u>₱3,140,943.62</u>	
Restorations, sanitation and transportation	45,543.71	
		<u>45,543.71</u>
Balance forwarded to fiscal year 1911.....		80,071.09
Total	<u>3,266,558.42</u>	<u>3,266,558.42</u>

SCHEDULE K.

Appropriation account.

By balance June 30, 1909:	Debit.	Credit.
In treasury	₱368,786.52	
In hands of disbursing officer.....	4,608.00	
		₱373,394.52
By appropriation for fiscal year 1910:		
Municipal Board		252,000.00
Fire department.....		328,800.00
Law department.....		34,100.00
Police department.....		550,000.00
School department.....		289,650.00
Engineering and public works.....		427,640.00
Sanitation and transportation		50,000.00
Assessments and collections		105,900.00
Bridges, esteros, parks, and streets.....		59,122.27
Cedula road and bridge fund, Act No. 1695.....		104,828.08
Public works and permanent improvements		47,350.00
Sanitary improvements		229,784.77
Interest and taxes erroneously collected.....		26,658.50
Fixed charges		625,110.00
Insurance fund		10,000.00
Restorations, department of sanitation and transportation.....		45,543.71
By receipts as per statement of income, Schedule B.....		1,703,285.65
To expenditures as per statement, Schedule C:		
Expense, expenditures—		
Administration	₱2,025,794.47	
Operation	815,002.13	
Maintenance	738,008.56	
Tax refunds	109,966.39	
Fixed charges	625,110.00	
	4,313,881.55	
Capital expenditures—		
Real estate	7,636.81	
Permanent improvements and equipment	386,621.05	
Supplies	49,792.49	
Investments	10,800.00	
	454,850.35	
	₱4,768,731.90	
Accounts payable		1,163.57
To reversion of unexpended appropriations.....	65,337.37	
Balance forwarded to fiscal year 1911:		
In treasury	429,201.80	
In hands of collecting officer.....	1,060.00	
	430,261.80	
	5,264,331.07	5,264,331.07

SCHEDULE L.

Statement of unexpended balances of appropriations and liabilities on account of the city of Manila.

	Treasury.	Officers.	Total.
DEPARTMENTS.			
Fire department	P239.99		P239.99
Police department	48.00		48.00
Department of sanitation and transportation	500.13		500.13
Engineering and public works	375.45		375.45
	1,163.57		1,163.57
PUBLIC WORKS.			
Drainage and improvement of low areas of city property, Ordinance No. 123	8,328.13		8,328.13
Bridges, esteros, parks, and streets, Act 1727	139,997.58		139,997.58
Cedula road and bridge fund, Act 1695	165,010.35		165,010.35
Removal and reerection of nipa houses, Ordinance No. 123	4,253.56		4,253.56
Sanitary improvements, Ordinance No. 133	173,334.85		173,334.85
	490,924.47		490,924.47
CAPITAL OPERATIONS.			
Insurance fund, Act 1706	971.92	P1,060.00	2,031.92
Stores and supplies	(70,127.56)		(70,127.56)
	(69,155.64)		(68,095.64)
SYNOPSIS.			
Appropriations:			
Departments	1,163.57		1,163.57
Public works	490,924.47		490,924.47
Capital operations	(69,155.64)	1,060.00	(68,095.64)
Cholera emergency fund	6,269.40		6,269.40
Total appropriations	429,201.80	1,060.00	430,261.80
City of Manila fund	80,071.09		80,071.09
Municipal revenue	(34,598.98)	34,598.98	
Special funds:			
Luneta Extension loan, Act 1360	15,000.00		15,000.00
Sewer and waterworks construction fund	795,277.00	35,000.00	830,277.00
Sewer installation fund	31,235.17		31,235.17
Sewer and waterworks bond sinking fund	(21,879.17)	3,960.00	(17,919.17)
Total city of Manila	1,294,306.91	74,618.98	1,368,925.89

DEPARTMENT OF ENGINEERING AND PUBLIC WORKS.

This department is charged with the construction and maintenance of streets and bridges; the maintenance and distribution of water supply; repairs of sewers and drains; the maintenance and repair of municipal buildings; the inspection of buildings, plumbing, and boilers; has partial charge of sanitary inspection; prepares all plans and estimates for municipal public works; constructs or supervises all municipal public works, including so-called sanitary barrios or districts; makes all surveys of streets and public property within the city limits; and provides for illumination of streets and public places.

The funds available for the work of the department during the fiscal year were as follows:

Amount appropriated by Ordinance 123.....	₱427,640.00
Receipts:	
Water rents	₱298,306.87
Building permits	17,524.01
Boiler inspection fees	2,780.00
Miscellaneous	1,349.25
	<hr/>
	319,960.13
Total	<hr/>
	747,600.13

PERSONNEL.

The personnel of the department consisted of an average of 51 classified employees, and 1,245 unclassified, making a total of 1,296 employees, of whom 27 were Americans.

ORGANIZATION.

The department is organized under the following heads: Office of street construction and bridges; office of water supply and sewers; office of drafting and surveys; inspection offices; and general office.

Mr. Clarence W. Hubbell was appointed city engineer on July 15, 1909, served until May 31, 1910, and was succeeded on June 6, 1910, by Mr. William H. Robinson.

STREET CONSTRUCTION AND BRIDGES.

For the purpose of street construction and maintenance, the city is divided into four districts, each under the supervision of a street inspector.

The length of streets included within these districts amounts to 95 miles.

PERMANENT PAVING.

The improvement of the streets of Manila by the installation of some form of permanent paving is receiving special and exhaustive consideration. The question could not be determined before, as practically every street in Manila, since American occupation, has had to be torn up at some time during this period for the installation of sewers, water, and conduits. There is still a small amount of water pipe to be laid, and also connections to the sanitary sewer are not completed. It will, however, be possible to complete these connections in every street that is to be paved, by carrying them to the property line, thus preventing the pavement from being torn up at some future period.

There are 465 streets and 17 plazas in the city of Manila, the total length of which equals 95 miles, and are paved with either wood blocks, granite blocks, or macadam. The area of macadam equals 1,400,000 square meters, and it is this area that has been studied in an endeavor to

determine the character of pavement to be installed in the various sections to fit the traffic conditions.

The macadam streets at the present time are not in satisfactory condition owing to the numerous excavations that have been made in them; and also to the poor quality of the stone used for surfacing. There are some streets also where the traffic is so heavy as to make it impossible to maintain a macadam roadway in good condition. The remedy of the existing condition lies in the installation of some form of permanent paving. The advantages of paving with a better and more permanent material are as follows:

1. Reduction in cost of maintenance.
2. Reduction in cost of hauling, and wear and tear on vehicles.
3. Does away with mud and dust nuisance and improves the comfort and convenience of residents.
4. Acts as a general improvement to the beauty of the city, and makes the streets a pleasure to drive over.
5. Improves the sanitary condition.
6. Reduces the necessity of frequently closing the streets for repairs.

Data have been collected and tests made showing the character and location of the available material which will enter into the proposed construction. Tests have also been made on stone obtained from China. Various classes of the softer native woods and also Oregon pine have been treated with creosote and used for paving blocks. These blocks, being of a softer wood, give a better foothold than molave. They have been laid on a portion of the Escolta for two years, and are giving very satisfactory results. A test of redwood for paving blocks has also been made, and covers a period of four years. The results to date are satisfactory.

Tests have also been made of cement blocks, concrete sheet paving, asphalt, bituminous macadam, and also a special treatment of cement and bitumen, and these tests, together with those on block paving, make it possible to determine the character of paving to be laid in each street to fit the locality and traffic conditions. The traffic on the main business streets amounts to from six to ten thousand vehicles in ten hours, making a haulage over the pavement for this period of between four and six thousand tons.

In general, for outlying districts, the pavement to be installed will consist of concrete sheet paving or a bituminous macadam. Hundreds of miles of bituminous macadam are now being laid by most large cities of the world, and it has the backing of a majority of city and highway engineers. Bituminous macadam consists in binding the broken stone together by means of coal tar and asphalt. The material is so graded as to require about ten per cent of bitumen to fill up the voids. The finished pavement is impervious, and, as the surface is fairly smooth, water flows quickly away, thus preventing injury to the foundation or road surface.

BRIDGES.

The maintenance and inspection of the 46 bridges owned by the city come under the supervision of a bridge inspector. They may be classified as follows:

Six of steel, with spans varying from 12 to 74 meters.

Twenty-two of stone masonry or reinforced concrete arches, with spans from 4 to 14 meters.

Eleven of I-beam or reinforced concrete slab construction, with spans from 5 to 10 meters.

Seven wood bridges, with spans from 8 to 11 meters.

One suspension bridge in the city, with a span of 100 meters, is owned by private parties, but is under the supervision of the bridge inspector.

Of the 46 bridges, 26 have either been built or rebuilt on permanent lines since American occupation, and it is the intention to replace the remaining 7 wooden structures with concrete as soon as funds will permit.

One example will suffice to show the enormous saving in a concrete bridge as compared with a similar structure of wood. In 1909 the San Agustin bridge, which was a wooden structure, was replaced with one of concrete. The cost of maintenance of this bridge in 1907 was ₱6,999.96. The cost of maintaining the concrete structure in 1910 was ₱75.83, a difference of over ₱6,924.00.

BRIDGES--NEW WORK.

Iris Bridge.—The old wooden structure was replaced with a reinforced concrete slab and girder structure. The bridge has a span of 10 meters and a width of 10 meters. It was designed to carry a 45-ton electric freight car. Work was commenced in January and completed in March, 1910. Cost of the construction, ₱5,435.17.

Gunao Bridge.—The old wooden structure and a portion of the abutments were removed and replaced with a reinforced concrete arch. The new structure has a span of 10.50 meters, a roadway of 5.10 meters, a sidewalk of 1.30 meters, and was designed to carry a 20-ton road roller. Work was commenced in January and completed in February, 1910. Cost of construction, ₱3,754.71.

Taft Avenue Bridge.—The work of extending Taft Avenue necessitated the construction of a bridge over the Baleta Estero. The original design contemplated a bridge for the full width of the street, the cost to be approximately ₱35,000. An appropriation of only ₱6,000 was allowed, with the understanding that a more permanent structure could be built at some future period. A slab structure, having a span of 5.60 meters, with reinforcing of old rails, was constructed at a cost of ₱4,532.90. The bridge was designed to carry a 20-ton road roller. No piles were used, the footings being spread sufficiently to obtain the

necessary bearing power. Work commenced in October and was finished in December, 1909.

Marques Bridge.—The wooden superstructure has been replaced by I-beams and a reinforced slab structure at a cost of ₱1,770.41. Work was commenced in July and was finished in August, 1909.

Escolla Bridge.—The sidewalk on the south side of this bridge has been widened from 0.40 meter to a width of 2.50 meters. The old abutments under the sidewalk were carried up and strengthened, and I-beams with reinforced floor slabs installed to obtain the necessary sidewalk width. Cost of work, ₱861.05.

Footbridges.—In order to help out the traffic in various sections, five wooden footbridges have been erected over esteros at the following locations: Calle Latorre, over Palomar estero; Calle Mendoza, over Centeno estero; two on Calle Soler; one over San Lazaro estero; and one over Magdalena estero; Calle Santa Elena, over Jolo estero. The total cost of this work amounted to ₱1,236.38.

Canonigo Bridge.—Plans have been prepared and contract let on June 22, 1910, to the Atlantic, Gulf and Pacific Company, for a reinforced-concrete arch over the Paco estero, on the line of Calle Canonigo extension. The bridge has a roadway of 10 meters, sidewalk of 1.80 meters, and the approaches are on a grade of 2.86 per cent. The span is 9.41 meters and the clear at mean low water is 3 meters. The contract price is ₱30,450.

Proposed bridges.—The traffic conditions would seem to warrant the construction of the following bridges, as soon as funds are available: Two reinforced-concrete arches on Calle Soler, one over the San Lazaro Estero, and the other over the Magdalena Estero; one steel bridge over the Pasig River.

CITY QUARRY (FORT M'KINLEY).

The quarry at Fort McKinley supplies the Guadalupe stone used in road and sidewalk foundations. This work is in charge of a foreman.

CITY QUARRY (TALIM).

The city quarry from which is obtained the crushed stone for the streets is located on the Island of Talim, Laguna de Bay, 27 miles from Manila. The work is in charge of a foreman and assistant foreman.

NEW QUARRY.

During the year special efforts have been made to locate a quarry that will give better stone for road work than is now produced at the Talim quarry. The Talim stone is very inferior as a road metal for streets having the heavy traffic which is found in Manila. With a view to improving the quality of stone used, an effort has been made to locate a new quarry. Trips have been made through the section surrounding

Laguna de Bay, and samples of stone obtained and tested to determine their efficiency as a road material. The Bureau of Science detailed a geologist in connection with this work, and the result has been that much information in addition to that obtained by the same Bureau in 1905, has become available. Of the various places visited, the samples of stone taken from the vicinity of Angono gave the most satisfactory tests. The city has staked out a mining claim at this location, and a quarry will be opened here if the quantity of stone obtainable from the selected site is sufficient to warrant the installation of a plant. Test holes are now being sunk to determine the amount of stone available on the site selected.

The following table gives the result of standard rattler tests made by the Bureau of Science on various classes of stone taken from the vicinity of Manila:

	Class of stone.	Percent- age of wear.
Talim	Basalt	2.57
Do	Decomposed basalt	8.66
Antipolo	Basalt	2.61
Los Baños	Andesite	2.66
Sisiman	do	4.08
Antipolo	Vesicular basalt	4.60
Montalban	Limestone	3.97
Angono ^a	Gabbro	2.12
Tayuman	do	2.31
Hyfong, China	Limestone	2.35

^a Proposed new city quarry.

Cost of crushed stone from city quarry, delivered in Manila, from July 1, 1909, to June 30, 1910:

	Per cubic meter.
Crushing	₱1.02
Towing50
Scows93
Total cost on dump in Manila	2.45

During the year 8,865.50 cubic meters of crushed stone were sold, valued at ₱22,252.41.

WATER TRANSPORTATION.

The city operates 2 launches and 21 scows for landing broken stone, Guadalupe stone, and gravel for use in street work. This work is in charge of the foreman of water transportation.

ESTEROS.

Esteros throughout the city, that are used for drainage only, are maintained by the city. All navigable esteros are maintained by the Insular Government, under the direct supervision of the Bureau of Navigation. The bridge inspector, in addition to his other duties, has charge of the city's work.

During the year, dredging has been performed in the Palomar, Iris, Balete, and Paco esteros; 12,935 cubic meters of material have been removed at a cost of ₱10,733.66.

The general improvement of esteros has been taken up with the Bureau of Navigation, and a general plan for estero improvement is now in course of preparation. The Bureau of Navigation is to handle the improvement of the esteros, or parts of esteros, that are considered navigable streams.

SANITARY IMPROVEMENTS.

Details of the sanitary work accomplished by the department of engineering and public works, including that part which was made possible by the special fund acquired from the sale of the Pasig River walls, which is the first large amount which has been made available for these much-needed developments, appear under heading "Municipal sanitary work." The supervision of the actual construction and the preparation of plans have been under charge of the office of street construction and bridges.

FUND EXPENDED DURING FISCAL YEAR 1910.

The total funds expended under the direction of the office of street construction and bridges, during the fiscal year ending June 30, 1910, amounted to ₱640,610.76. This fund was expended on streets, bridges, esteros, sanitary barrios, and for various Bureaus. The refund incident to the work performed for other Bureaus amounted to ₱67,010.87.

WATER SUPPLY AND SEWERS.

WATER SYSTEM.

The water supply during the entire year has been furnished directly from the headworks above Montalban, and it has not been necessary at any time during the year to call into use the old pumping station at Santolan.

EL DEPOSITO.

The only work carried on has been the regular maintenance of building and grounds and the annual cleaning of the old reservoir. The total cost of this work was ₱5,421.08.

NEW RESERVOIR.

The reservoir was drained and cleaned during the months of June and July, 1909. It was found that the silt deposit was quite heavy near the north side, and that at other places but little deposit had accumulated. The concrete work on both the reservoir and tunnels has weathered well. Although there is a very large area of concrete lining on the reservoir exposed to the action of the elements, not a single leak or crack of consequence is apparent.

Parking and ditching about the reservoir and general maintenance has been carried on throughout the year at a total cost of ₱8,380.84.

HEADWORKS.

Inasmuch as the work of completing the dam has been progressing during the entire year, this part of the work has been done by the department of sewer and waterworks construction under the regular contract, and up to June 30, 1910, had not been turned over to this department. The only work done by this department was the maintenance of the telephone line, roadway, and general supervision of the pipe line. Cost of this work, ₱2,377.81.

SANTOLAN PUMPING STATION.

No occasion has arisen for the use of the pumps, as the gravity supply from the headworks has operated uninterruptedly. The pumps and boilers were cleaned and placed in good condition and are in readiness in case they should be needed in future. No work has been carried on except a small amount of maintenance by the watchmen. Cost, ₱3,046.60.

On June 1, 1910, the personnel of the department of sewer and waterworks construction and that of water supply and sewers were combined in one office. The usual routine work was carried out satisfactorily at a cost of ₱14,175.96.

WATER SUPPLY SHOPS.

The work done by the shops consisted in the usual maintenance, repair, and inspection of the entire water system within the city limits, including private service connections, testing pipe, meters, etc., and in addition the seventeen pipe inspectors were temporarily loaned to the department of sewer and waterworks construction, in connection with the distribution system. A considerable amount of work has been done by the shop forces in removing old pipes when new mains were laid.

There was laid, during the year, by the shop force, approximately 3.19 miles of pipe of various sizes, the largest being 16 inches in diameter.

There were installed 17 public hydrants, making the total number in use 173.

The number of metered water services in use at the end of the fiscal year was 4,830.

The total mileage of city mains has reached about 77.65 miles, ranging in size from 4 inches to 42 inches.

SANITARY SEWERS AND STORM-WATER DRAINS.

There was constructed during the year, by administration, the following sanitary sewers:

Five thousand and seventy-five lineal feet of 6 inch; 1,569 lineal feet of 8 inch; 711 lineal feet of 10 inch; 831 lineal feet of 12 inch; 1,000 lineal feet of 15 inch; 400 lineal feet of 18 inch; 800 lineal feet of 21 inch; 396 lineal feet of 2 feet by 3 feet.

On Calle Nozaleda 278 lineal feet of 12-inch storm-water drain was built.

The total cost of operation and maintenance of sewers was ₱21,434.48.

DRAFTING AND SURVEYS.

OFFICE WORK.

This office, having charge of all the surveying work of the department of engineering and public works, and the surveillance of all city lands to prevent encroachment by the adjoining private property owners, gives lines and grades for all streets, bridges, fences, and all construction work, whether private or public; surveys all city property; prepares plans and technical descriptions for the expropriation of private properties needed by the city; checks all the plans presented to the Court of Land Registration within city limits; lays out street systems; and prepares estimates of cost of public improvements of every description.

One of the most important works accomplished this year is the permanent establishment of the $2\frac{1}{2}$ -mile limit of Manila police jurisdiction beyond the city boundaries. Two parties, each consisting of five men in charge of an engineer, have been continuously engaged in this work, one of them for five and one-half months, and the other for two months. The purpose for which this work has been done is to enable any court of justice in the city or in the neighboring province to decide at once whether a criminal case has been perpetrated within the Manila police jurisdiction or not.

The total number of jobs received during the year was 1,402, of which 1,390 were dispatched before July 1, 1910.

Expropriation surveys of all the private properties on Canonigo extension, Iris extension, Buenos Aires, and Callejón Turco have been made to open these streets. Expropriation survey for the widening of Calle Herran, Paco, from the bridge to the railroad track, and also expropriation and appropriation survey along the east line of the Cavite Boulevard, from Calle Isaac Peral to Malate Church, have been accomplished. The boulevard line beyond this has not been definitely settled, and it will depend largely upon the line of the private properties along the bay. To ascertain this line, a survey of all these private properties is being carried through and extended to the Polo Club grounds. Considerable difficulty is encountered in this survey, in view of the fact that many of the private registered plans are grossly erroneous.

INSPECTION OFFICES.

BUILDING INSPECTION.

The number of permits issued by this office during the fiscal year was 6,801, of which 387 were for the construction of strong-material buildings, 511 for the construction of light and mixed material buildings, 1,176

for the repair of strong-material buildings, 4,127 for the repair of light and mixed material buildings, 62 for obstruction of streets during construction of buildings, 153 for temporary buildings, and 20 for duplicate licenses, also 365 licenses for sign boards.

A comparison with the two preceding years shows a decided increase in the construction of strong-material buildings throughout the city, and a similar decrease in the construction of light-material buildings, due to the passage of city Ordinance No. 124, prohibiting interior construction.

	1908		1909		1910	
	Number.	Value.	Number.	Value.	Number.	Value.
Strong materials:						
New buildings	459	₱1,030,650	380	₱813,920	387	₱1,641,550
Repairs	1,008	207,815	1,123	198,683	1,176	191,416
Light and mixed materials:						
New buildings	1,111	144,582	866	122,558	511	89,745
Repairs	3,286	141,487	4,215	190,158	4,127	161,420

Fees collected for building permits of all classes :

1908	₱14,994.87
1909	16,140.38
1910	17,524.01

ILLEGAL REPAIRS.

Considerable work has been done toward checking the repairs to light-material houses within the districts of strong materials. Eighty-three convictions have been secured in the municipal court for violation of the ordinances in respect thereto. The fines imposed amounted to ₱657.40.

Ninety-three houses have been condemned and removed by reason of their being unsafe or insanitary.

Greater progress is to be expected next year in removing light-material houses from strong-material districts, on account of the near completion of the new sanitary barrios which the city is bringing into practical existence.

CONCRETE BUILDINGS.

A gradual tendency toward reinforced-concrete building is evident in various parts of the city. During the year buildings to the value of ₱537,500 have been constructed or are in process of construction.

BOILER INSPECTION.

There are at present 220 boilers and 26 gas motors registered in the office of the boiler inspector.

During the year, besides the semiannual inspection, 154 annual boiler and motor inspections were made; 149 certificates of inspection issued; and 5 boilers were condemned. The total fees collected amounted to ₱2,780.

No serious accidents occurred during the year.

On January 1, 1910, Ordinance No. 128 went into effect, and is being gradually enforced so as to avoid unnecessary hardship to the old installations made prior to the passage of this ordinance, but all new installations are made under its provisions.

PLUMBING INSPECTION.

The plumbing work in the city has undergone a decided change during the year, both as to quantity and quality.

The completion of the new sanitary sewer marks a new epoch in the annals of the plumbing business, and quite a number of house owners have taken advantage of the opportunity to remodel their antiquated plumbing systems and have their houses connected with the new sewer.

Five hundred and twenty-six houses were connected since the sewer has been in operation, and this number would have been doubled, or nearly so, but for the continued scarcity of proper fittings and fixtures in the market, and the lack of skilled labor to do good work.

The new sewer being municipal, the installations and connections of military and Insular Government buildings are by mutual understanding now inspected by this division.

During the year, several large buildings, both Government and private property, have been erected, and some are still under construction, in each of which extensive plumbing systems are being installed. Among these may be mentioned the Y. M. C. A. Building, the General Hospital, the Medical School, the Army and Navy Club, and the Elks Club.

The larger institutions which have been ordered connected and their old offensive systems remodeled include all the convents of Intramuros.

Twenty-two septic vaults were constructed, but only on premises located on streets where no sewer is laid.

Preparations are complete for installing modern systems in all public markets during the coming year, as well as in all other public buildings owned by the city.

The total estimated cost of plumbing installed in private buildings during the year is ₱255,235.

GENERAL OFFICE.

The work done in the general office consists of the supervision of the maintenance and repair of municipal buildings; keeping an account of the property of the department (the nonexpendable part of which is valued at ₱333,273.01); the preparation of pay rolls and vouchers; keeping track of the expenditures from the allotments of the various divisions of the department and credits thereto; rendering bills; making requisitions; keeping civil-service records; writing and recording correspondence. The foregoing work is done not only for the department of engineering and public works, but also for the department of sewer and waterworks construction.

MAINTENANCE AND REPAIR OF MUNICIPAL BUILDINGS.

The work of connecting municipal buildings with the new sewer system was commenced, in many cases necessitating the installation of flush closets and the remodeling of the house plumbing. At the Luneta police station a complete system of flush closets and plumbing was installed, including closets in cells. Work of this nature will be continued during the coming year until all of the buildings owned by the city have proper sanitary plumbing systems.

The condition of the municipal buildings was materially improved during the year by alteration and repairs, and as all lumber used in such alterations and repairs was of the first group, the new work is insured against the ravages of time and insects for many years to come. Three hundred and ninety-eight jobs were done, the principal of which were the following:

Built a general storehouse in Arroceros yards for the city supply officer, ₱9,093.67.

Built a third story on the rear of the right wing of the City Hall, for the use of the Court of Land Registration, at a cost of ₱4,918.85.

Built two disposal stations, one on Calle Herran and one on Calle Azcarraga, at a cost of ₱2,085.03. The balance of the work, performed by other branches of the department, brought the cost up to ₱8,850.

Made alterations and additions to Meisic police station, ₱1,734.15.

Relaid the flat part of roof of Quinta Market and added additional bolting, ₱2,170.24.

Erected fence and buildings for 1910 Carnival; cost of labor only, ₱6,013.88.

Reconstructed Meisic School Building No. 2, the old building being almost totally worthless.

POLICE DEPARTMENT.

The appropriation for the police department for the fiscal year 1910, as provided by Ordinance No. 123, was ₱550,000. In addition to this amount there were available for expenditure for the maintenance of the department, receipts from the various municipal licenses, collected by the city assessor and collector, to the amount of ₱243,656.33, also miscellaneous receipts of ₱167.86, or a total of ₱243,824.19.

The expenditures were as follows:

Salaries and wages	₱695,436.68
Contingent expenses	81,474.57
Total	776,911.25

(For details, see report of the disbursing officer.)

PRESENT STRENGTH OF DEPARTMENT.

One chief of police, 1 assistant chief of police, 6 captains, 22 first-class sergeants, 147 first-class patrolmen, 16 second and third class sergeants, 20 second-class patrolmen, 263 third-class patrolmen.

There are 91 first-class patrolmen receiving ₱2,280 per annum, 9 receiving ₱2,160, 9 receiving ₱2,000, and 28 receiving ₱1,800 per annum; 20 second-class patrolmen receiving ₱900 per annum; 221 third-class patrolmen receiving ₱720 per annum, 9 receiving ₱660, 26 receiving ₱600, and 7 receiving ₱480 per annum.

Office force.—Americans, 5; Filipinos, 5.

CHANGES IN THE DEPARTMENT.

	Police.		Secret service.		Office force.	
	First class (Ameri- cans).	Second and third class (Fil- ipinos).	Ameri- cans.	Filipinos.	Ameri- cans.	Filipinos.
Appointments.....	65	7	3	7		1
Reinstatements.....	16	4				
Promotions.....	6		5	6	1	
Discharged:						
Own request.....	40	9	3	5		
Good of service.....	14	6				
Transferred:						
From department.....	10	1				1
To department.....	2	2				
Deaths.....	2	3				
Longevity increases.....	23	40				
On leave:						
Accrued.....	51	205				
Vacation.....	158	289				
Without pay.....	12	21				
Temporary appointments.....	39					
Discharges.....	41					

1 Chinese interpreter discharged, own request.

SUMMARY COURT.

There were 85 trials by summary court. The amount realized by fines was ₱518.84.

POLICE FUND.

Balance on hand July 1, 1909.....	₱5,082.03
Receipts from fines.....	518.84
Donations from different sources.....	43.51
Interest on fixed deposits.....	140.00
Total	₱5,784.38
Expenditures	1,200.73
Balance on hand June 30, 1910.....	4,583.65

of which amount ₱4,000 is on fixed deposit and ₱583.65 on current account.

PATROL WAGONS.

On December 23, 1909, the new automobile patrol wagons were installed and the old wagons discarded, being placed in reserve. The horses were transferred to the department of sanitation and transportation.

The patrol wagons answered 158 fast and 3,864 slow calls.

On March 1, 1910, the chief of police was furnished an automobile in lieu of a carromata.

The improvement to the service, due to this up-to-date transportation, is very material. The chief and assistant chief of the department are able to extend their inspection and effective immediate control of the force in all parts of the city to a very marked degree.

Apart from tire troubles during the hot season, which situation was aggravated by delay in obtaining new supplies, these automobiles have been satisfactory.

FIREARM PERMITS.

Action was taken on firearm permits as follows:

Applications sent to the Bureau of Constabulary.....	291
Approved	236
Disapproved	24
Pending	29
Withdrawn	2
Permits issued for purchase of ammunition.....	1,289
Firearms licensed in city of Manila:	
Shotguns	551
Rifles	295
Revolvers	648
Total	1,494

CONFISCATED, FOUND, AND STOLEN PROPERTY.

Total entries received up to and including end of year.....	2,504
Entries received during the year.....	87
Entries returned to owners, administrators, etc.....	15
Entries of money, amounting to ₱143.86 Philippine currency, transferred to disbursing officer, Municipal Board.....	44
Entries of money, amounting to \$12.75 Mexican, transferred to disbursing officer, Municipal Board	3
Entries remaining on hand.....	162

CASH RECEIPT AND CREDITS.

Balance on hand July 1, 1909.....	₱42.79
Received during the year.....	680.53
	₱723.32
Returned to owners, administrators, etc.....	570.13
Transferred to disbursing officer.....	143.86
	713.99
Balance on hand June 30, 1910.....	9.33

ARRESTS.

In all, 15,658 arrests were made during the year. This is an increase of 2,554 over the previous year. The chief causes for the apprehension of prisoners were as follows:

Crime.	1908	1909	1910
Gambling and conducting gambling	2,728	4,136	4,755
Disorderly conduct	790	766	671
Cruelty to animals	437	588	1,533
Violation of sanitary regulations	358	709	339
Violation of opium law	653	1,054	729
Blocking the highway	261	57	88
Theft	243	526	644
Violation of license regulations	189	233	175
Vagrancy	145	200	231
Larceny	201	201	150
Assault	106	304	275
Embezzlement and estafa	46	116	159

Number of males arrested.....	13,943
Number of females arrested.....	2,615
Total	15,658

BY NATIONALITY.

Natives	12,318
Chinese	2,669
Americans	504
Europeans	100
Japanese	33
East Indians	19
Turks	6
Syrians	2
Cubans	2
Persian	1
Australian	1
South American	1
Korean	1
Canadian	1
Total	15,658

BY STATIONS.

Secret-service bureau	2,474
Luneta police station	3,564
Meisic police station	5,031
Sampaloc police station	1,351
Tondo police station	2,447
Paco police station	791
Total	15,658

ARMS AND EQUIPMENTS.

The arms and equipments of the department are in good condition. All articles lost by members during the year have been paid for.

SECRET-SERVICE BUREAU.

One chief, 10 American detectives, 10 Filipino detectives, 2 messengers.

The secret-service bureau recovered stolen money to the amount of ₱4,172 and stolen property to the value of ₱26,609.60, making a total of ₱30,781.60. Property to the value of ₱6,624.30 was recovered from pawnshops by the pawnshop inspector.

Persons measured and photographed, 942; measurements verified, 765; identifications of old criminals, 437; records furnished, 417; persons without record received, 2,441; making a total of 5,002 persons handled by the identification department of the bureau.

Total number of ships from foreign ports arriving in Manila Bay, 682; number boarded by an agent of the bureau, 490; not boarded, 192. Number of ships leaving Manila Bay for foreign ports, 657; boarded by agent, 477; not boarded, 180.

The failure to board the ships enumerated in above paragraph is due to lack of transportation and to the inconvenience and often the impossibility of reaching such vessels.

PUBLIC-VEHICLE SERVICE.

The police and the city assessor and collector have maintained a substantial coöperation in the regulation of the public-vehicle service, with encouraging results. In the last annual report it was noted that their work caused a steady improvement in the condition of this traffic. The same holds true, in a more marked degree, for the past year. The system of temporary confiscation of licenses by the police in cases where vehicles, harness, equipment in general, or the horses are in a condition unsatisfactory to the requirements of the service, pending the necessary corrective action on the part of the owners of the said vehicles and animals, is found to be productive of improvement and meets with but little opposition.

Licenses were confiscated, as noted in the following table, by the police and forwarded to the city assessor and collector, and held by him until the abuses or nuisances were corrected:

Licenses expired	284
Horse unfit for service.....	119
Vehicle unfit for service.....	94
Vehicle and harness unfit for service.....	63
No number on lamps.....	47
Harness unfit for service.....	33
No tariff card	20
Horse and vehicle unfit for service.....	12
No disk and number plate concealed.....	7
Cruelty to animals.....	4
Driver under age	2
No license	1
No storm curtains	1
Driving on wrong side of street.....	1
Vehicle in insanitary condition.....	1
Total	689

CRUELTY TO ANIMALS.

As usual, special attention was given to all cases involving cruelty to animals, and in this work the coöperation of the Society for the Prevention of Cruelty to Animals is gratefully acknowledged. 1,533 arrests were made on above charge and 14 for overloading.

MOTOR VEHICLES.

The registration of motor vehicles, in accordance with Ordinance No. 130, commenced on April 1, 1910, but for the convenience of owners, and to allow sufficient time for compliance with the law, the ordinance was not enforced until April 15.

Total number of automobiles registered.....	286
Passenger	275
Freight	11
Total	286
Official use	32
Private use	168
Public use	73
For sale	13
Total	286
Gasoline motor power	250
Steam motor power	28
Electric motor power	8
Total	286
Total number of motorcycles registered.....	64
Official use	22
Private use	36
For sale	6
Total	64
Gasoline motor power	64

Certificates issued for motor vehicles to be used for demonstrating purposes only:

Automobiles	11
Motorcycles	4
Total	15

The new ordinance is not satisfactory to the Board. It was passed mainly for the purpose of securing certain regulation by the police, fixing speed limits, and providing means of identifying the vehicles. Steps have been taken to remedy this condition, and an amendment to the Charter has been submitted to the Legislature and was before that body at the last session, but was not the subject of action. In the

meantime, the city authorities are unable to properly control and regulate the use of motor vehicles by providing for examination and licensing of chauffeurs, the inspection of machinery, charging of a reasonable fee therefor, and taking such other measures as are common in progressive cities and universally recognized as highly proper for the protection of the owners and the users of machines, as well as for the public in general. A lack of proper control of the chauffeurs, and especially the inability to enforce the passing of a proper examination before the issuance of licenses, has led to many abuses and annoyances, and it is hoped this matter will receive the early attention of the Legislature at its next session.

PUBLIC HEALTH WORK.

Fortunately, cholera has been almost entirely excluded from the city during the past year. The department maintained a regular detail of nineteen patrolmen, who served with the Bureau of Health during the entire year. In addition to this number, an extra detail, averaging 44 men daily, as shown in table below, made a house-to-house inspection throughout the city from July 1 to November 21, 1909. The value of these extra services amounted to \$13,510.

Extra duty performed by police for Bureau of Health.

Date.	Daily average of third-class patrolmen employed.	Second-class sergeants employed.	Number of days employed.
July, 1909	32	1	19
August, 1909	45	1	31
September, 1909	47	1	28
October, 1909	50	1	29
November 1 to 21, 1909	63	1	20

LABOR DISTURBANCES.

During the period October 11 to 14, 1909, inclusive, a strike occurred at the Oriente Cigar Factory, which necessitated a police guard being placed in the vicinity of the company's buildings.

On March 1, 1910, a strike was declared among the crews of the coastwise steamers, and lasted until March 3. During this time extra duty was performed by the police in protecting shipping along the water front.

On April 26, 1910, this strike was renewed, and was in effect at the end of the fiscal year.

THE CARNIVAL.

During the last Carnival no leave was granted members of the department, as every available man was required for the extra duty performed.

The following table gives a brief summary of the general work accom-

plished during the year by the various precincts not otherwise noted in this report:

	Precinct.				
	1.	2.	4.	5.	6.
Force:					
Captain	1	1	1	1	1
Sergeants, first class	8	8	6		
Patrolmen, first class	44	73	30		
Sergeants, second class	1			6	3
Sergeants, third class				2	4
Patrolmen, second class	3	6	2	4	5
Patrolmen, third class	32	50	34	87	60
Extra work performed:					
Church processions held	17	17	24	22	34
Parades held	9	11	1	3	8
Receptions, etc., held	29	22	21	3	88
Horse races held				19	
Accidents in precinct:					
Street car	54	74	36	17	42
Miscellaneous	214	195	91	46	57
Persons injured	197	121	60	44	40
Persons killed	1	7	2		2
Reports made:					
Re street lights	1,676	2,605	1,525	1,179	1,259
Re electric light, telephone, and telegraph wires down	91	94	100	25	26
Re dangerous condition of streets and sidewalks	270	79	62	18	43
Re hydrants and fire plugs	47	37	163	95	40
Re water pipes, sewers, and drain pipes	61	199	365	31	21
Subpenas served	826	3,482	1,211	1,264	171
Children found and restored to parents	3	32	2	3	1
Human bodies found	10	11	10	4	3
Dead animals reported	125	209	218	151	59
Animals found running at large	89	16	28	17	6
License locations inspected	755	3,166	1,210	1,391	518

	By Precinct No—				
	1.	2.	4.	5.	6.
Stolen property was recovered to the value of	₹917.50	₹1,958.40	₹1,179.37	₹430.17	₹267.81

LAW DEPARTMENT.

The law department consists of six offices—the city attorney, office of the prosecuting attorney, office of the municipal court, office of register of deeds, office of the justice of the peace, office of the sheriff.

The amounts expended by the city for the maintenance of each of these offices during the fiscal year ending June 30, 1910, as compared with the preceding two years, are as follows:

Expenses of the law department.

Office.	Salaries and wages, fiscal year—		
	1908	1909	1910
City attorney	₹17,841.14	₹16,944.46	₹20,533.86
Prosecuting attorney	31,817.22	33,509.77	36,097.24
Sheriff	12,756.72	11,837.37	12,225.32
Municipal court	16,259.08	14,664.77	14,907.03
Register of deeds	8,924.92	9,519.92	10,561.51
Justice of the peace	4,655.47	4,717.14	4,254.63
Total	92,254.55	91,193.43	98,579.59
Contingent expenses	14,387.70	15,899.47	16,821.22
Grand total	106,642.25	107,092.90	115,400.81

OFFICE OF THE CITY ATTORNEY.

The force of this office during the fiscal year 1910 consisted of 6 Filipino employees, to wit: City attorney; assistant city attorney; 1 clerk, class 8; 1 clerk, class 10; 1 clerk, Class A; 1 messenger.

Administrative labors during the fiscal years 1908, 1909, and 1910.

Nature of work performed.	1908	1909	1910
Opinions written	23	48	47
Ordinances prepared	7	10	8
Acts		1	
Bonds, contracts, deeds, etc., prepared	56	76	100
Letters sent	327	298	236
Letters received	303	296	320

Cases attended.

FISCAL YEAR 1908.

Court.	Finished.					Pend- ing.	Total cases.
	Won.	Ap- peals to United States.	Lost.	Dis- missed.	Total.		
Supreme Court.....	11	2	10	1	24	17	41
Court of First Instance	7		3	4	14	26	40
Court of Land Registration	24		4		28	13	41
Court of justice of the peace	7			26	33	14	47
Municipal court.....				1	1		1
Total.....	49	2	17	32	100	70	170

FISCAL YEAR 1909.

Supreme Court.....	1		5	1	7	13	20
Court of First Instance	12		8	2	22	21	43
Court of Land Registration	12		3	1	16	13	29
Court of justice of the peace	51		2	1	54	48	102
Court of First Instance of Rizal, P. I.....						3	3
Total.....	76		18	5	99	98	197

FISCAL YEAR 1910.

Supreme Court.....	1		2	9	12	9	21
Court of First Instance	10		4	7	21	11	32
Court of Land Registration	10		7	8	25	8	33
Court of justice of the peace	105			133	238		238
Court of First Instance of Rizal, P. I.....	2				2	1	3
Total.....	128		13	157	298	29	327

OFFICE OF THE PROSECUTING ATTORNEY.

The personnel of this office at the end of the fiscal year 1910 consisted of 12 employees, 5 Americans and 7 Filipinos, as follows: Prosecuting attorney (A.); first assistant prosecuting attorney (F.); second assistant prosecuting attorney (F.); third assistant prosecuting attorney (F.); fourth assistant prosecuting attorney (A.); chief clerk, class 6 (A.); 1 clerk, class 8 (A.); 1 clerk, class 9 (A.); 1 clerk, class 10 (F.); 1 clerk, Class B (F.); 1 clerk, Class F (F.); and 1 messenger (F.).

The following changes have occurred in the personnel of this office during the fiscal year: The Hon. Jesse George, former prosecuting attorney, was, on January 1, 1910, appointed judge of the Court of Land Registration, and L. M. Southworth, assistant prosecuting attorney, was advanced to the position of prosecuting attorney on the same date. This caused a general promotion of all of the assistant prosecuting attorneys as follows: Salvador Zaragoza, first assistant prosecuting attorney, January 1, 1910; Quintin Paredes, second assistant prosecuting attorney, January 1, 1910; Carlos A. Sobral, third assistant prosecuting attorney, January 1, 1910; James R. Malott, fourth assistant prosecuting attorney, January 1, 1910.

Work performed by this office during the fiscal years 1908, 1909, and 1910.

Character of work.	1908	1909	1910
Investigations made	8,076	11,288	14,279
Cases prosecuted in the Court of First Instance	680	1,195	1,323
Cases prosecuted in the municipal court	5,896	6,484	10,562
Coroner's inquests held	84	116	120

Disposition of cases in Court of First Instance during the fiscal years 1908, 1909, and 1910.

Action.	1908	1909	1910
Convictions	404	1,051	1,025
Dismissals	111	97	84
Acquittals	55	75	100
Pending	112	60	58
Sentence suspended	4		
Demurrer sustained	1		
Bail forfeited	2		1
Sent to Hospicio de San Jose	7	6	6
Sent to municipal court	2	2	
Sent to provinces	1		
Sent to United States	1		
Deportations	1		21
Turned over to U. S. steamer "Relief"		1	
Search warrants issued	25	11	18
Sent to Hongkong for trial	1		
Habeas corpus defended		1	
No conciliation		1	
Acts of conciliation			1
Sent to the files			9
Total	727	1,307	1,323

Disposition of cases in municipal court during the fiscal years 1908, 1909, and 1910.

Action.	1908	1909	1910
Convictions	4,718	5,091	8,567
Dismissals	202	145	613
Acquittals	679	989	1,043
Pending	144	38	43
Bail forfeited	4	26	44
Demurrer sustained			2
Deported			3
Sent to Hospicio de San Jose	126	165	177
Delivered to family	4		
Sent to San Lazaro Hospital	11	6	25
Sent to San Juan de Dios Hospital			1
Sent to Chinese Hospital	4	6	10
Sent to provinces	1		
Sentence suspended		2	2
Search warrants issued	2	9	32
Transferred to Rizal Province		1	
Turned over to Navy	1		
Complaints duplicated		5	
Bond to keep peace		1	
Total	5,896	6,484	10,562

There being urgent necessity for the removal of the offices of the prosecuting attorney to another building, due to the fact that the rooms now occupied by said official are required for one of the branches of the Court of First Instance, the Municipal Board requested the Governor-General to transfer to the city the building located on the corner of Calles Arzobispo and Postigo. The sum of ₱10,000 has been included in the estimates for the ensuing year with which to construct suitable offices in this building for the prosecuting attorney when the transfer of ownership above referred to shall have been made.

OFFICE OF THE MUNICIPAL COURT.

The personnel of this office during the fiscal year 1910 consisted of 7 employees, 1 American and 6 Filipinos, as follows: Judge (A.); 1 clerk, class 8 (F.); 1 interpreter, Class A (F.); 3 deputy clerks, Class D (F.); 1 messenger (F.).

Work performed by this office during the fiscal years 1908, 1909, and 1910.

Nature of work.	1908	1909	1910
Number of cases filed	5,962	6,484	10,562
Number of cases tried		6,415	10,486
Number of cases pending		60	44
Number of search warrants issued		9	33
Number of defendants tried	9,057	10,399	14,631
Defendants with bail	3,679	4,030	4,136
Defendants without bail	5,358	6,369	10,495
Males tried	7,558	8,421	12,158
Females tried	1,499	1,978	2,473
Minors tried	115		
Filipinos tried	7,121	8,372	12,674
Americans tried	333	263	336
Chinese tried	1,484	1,668	1,503
Other nationalities tried	119	96	118
Minors committed to Hospicio de San Jose	57	73	78
Insane committed to San Lazaro Hospital		8	25
Insane committed to Hospicio de San Jose		125	106
Insane committed to Chinese Hospital		8	10
Prisoners sent to Bilbid		1,296	1,749
Prisoners serving time in Luneta police station		37	10
Defendants paying fines		7,167	9,147
Defendants (sentence revoked, cedula produced)			683
Cases appealed to Court of First Instance	173	170	264
Cases (demurrer sustained)			2
Defendants acquitted and dismissed	1,446	1,572	1,895

On June 4, 1910, the Municipal Board approved a scheme for the office of the clerk of the municipal court, whereby the system of money accountability, indexing of records and dockets, and the keeping of the different books required, is greatly improved. In this scheme provision is made for a slightly increased force, so as to be able to handle with care and dispatch the daily business, consisting of an average of 30 cases.

OFFICE OF THE REGISTER OF DEEDS.

The personnel of this office during the fiscal year 1910 consisted of 8 employees, all Filipinos, as follows: Register of deeds; 1 clerk, Class D; 3 clerks, Class F; 2 clerks, Class G; 2 clerks, Class H; 1 messenger.

Work performed by this office during the fiscal years 1908, 1909, and 1910.

Nature of work.	1908				1909				1910			
	Mort- gage Law.	Act No. 496.	Act No. 1508.	Act No. 1699.	Mort- gage Law.	Act No. 496.	Act No. 1508.	Act No. 1699.	Mort- gage Law.	Act No. 496.	Act No. 1508.	Act No. 1699.
Total titles presented	845				736				788			
Certificates of entries issued	76				53				63			
Statement and researches	110				107				163			
Notes of consolidation	35				26				30			
Decrees of court transcribed		355				228				309		
Entries made		626				610				745		
Certificates of titles issued		228				250				381		
Additional copies		21				29				19		
Certified copies of documents		27				32				55		
Professional titles recorded		17				6				67		
Notifications of applications annotated		69				20						
Documents transcribed			608				420				594	
Certified copies of documents			4				5				3	
Records certified				153				355				250
Total	1,066	1,343	612	153	922	1,175	425	355	1,044	1,576	597	250

OFFICE OF THE JUSTICE OF THE PEACE.

The force of this office during the fiscal year 1910, as in the previous year 1909, consisted of 4 Filipino employees, to wit: Justice of the peace; 1 clerk, Class H; 2 clerks, Class K.

On April 2, 1910, Hon. Bartolomé Revilla was appointed justice of the peace of the city of Manila in place of Hon. Jose M. Quintero, who on the same date was transferred as prosecuting attorney of the Province of Cavite.

Work performed by this office during the fiscal years 1908, 1909, and 1910.

Court operations.	1908	1909	1910
Pending cases before July 1	103	44	99
Suits entered in docket during the fiscal year		1,648	1,666
Suits decided upon		1,282	1,410
Suits decided and appealed		133	81
Suits postponed indefinitely		51	13
Suits closed on dismissal		241	235
Total suits tried	1,609	1,707	
Pending cases			26
Marriage certificates	2,099	2,273	2,256
Marriages solemnized	19	49	47
Books of commerce sealed	196	188	226
Oaths	7	4	40

OFFICE OF THE SHERIFF.

The personnel of this office during the fiscal year 1910 consisted of 8 employees, 1 American and 7 Filipinos, as follows: Ex officio sheriff, at ₱2,000 per annum (F.); 1 deputy sheriff, class 6 (A.); 1 deputy sheriff, Class D (F.); 1 deputy sheriff, Class F (F.); 2 deputy sheriffs, Class H (F.); 1 deputy sheriff, Class J (F.); 1 clerk, Class H (F.).

Work accomplished during the fiscal years 1908, 1909, and 1910.

Nature of work.	1908	1909	1910
Attachments.....	147	93	77
Attachments discharged.....	36	17	19
Appointments made.....	5	10	
Bench warrants.....	2	11	12
Citations:			
Civil, subpoenas.....	731	851	1,025
Criminal, subpoenas.....	116	3,806	4,721
Certificates of sale.....	54	37	23
Claims filed.....	9	13	
Executions.....	551	886	1,629
Foreclosures of chattel mortgage.....	60	43	40
Garnishees.....	218	148	194
Indemnity bonds.....	25	12	5
Indorsements made.....		4	
Injunctions.....	30	20	78
Letters written.....	15	174	249
Levies discharged.....	5	1	13
Notices of register of deeds.....	72	48	87
Notices of involuntary bankruptcy.....			2
Notifications.....	265	286	339
Officer's deeds.....		5	
Orders to declare.....	25	6	
Orders of ouster.....	313	200	300
Orders of arrest:			
Civil.....	63	35	26
Criminal.....	548	1,100	1,138
Orders of sale.....	1	3	
Orders to show cause.....	64	44	49
Orders to deposit.....	1	1	
Orders to deliver.....	5		
Orders to pay.....		1	
Posting notices, Court of Land Registration.....	612	199	291
Prisoners:			
Committed.....	474	566	768
Incarcerated.....	311	797	684
Released.....	104	141	69
Bailed.....	104	103	152
Requisitions passed.....	3	5	
Replevins discharged.....	2	3	
Reports made.....		37	
Sales advertised.....	229	183	195
Sales made.....	92	75	92
Summonses.....	2,473	2,171	2,304
Writs of habeas corpus.....	37	29	25
Writs of replevin.....	19	27	18
Writs of mandamus.....		1	

FIRE DEPARTMENT.

The appropriation for the fire department for the fiscal year 1910, as provided by Ordinance No. 123, was ₱328,000. In addition to this amount there was available for expenditure for maintenance the receipts collected by the city assessor and collector from the operation of the city electrician's office, ₱6,977.10, and miscellaneous receipts, ₱131.34, or

a total of ₱7,108.44. The expenditures, as compared with the preceding fiscal year, were as follows:

	1909.	1910.
Salaries and wages.....	₱229,953.98	₱237,088.64
Contingent expenses	83,682.49	96,040.12
Total	313,636.47	333,128.76

(For detailed information, see report of the disbursing officer.)

There is no material change in the strength of the uniformed force, which, including officers, consists of 135 men, as follows:

Chief	1
Deputy chief	1
Chief of construction and repair.....	1
Captains	8
Lieutenants	13
Engineers:	
First class	5
Second class	9
Firemen:	
First class	47
Second class	50
Total	135

The office force consists of 1 American and 2 Filipino clerks.

Changes in department, including electrical division.

	Firemen.		Miscellaneous.
	First class.	Second class.	
Appointment:			
Probational	22	3	
Temporary	14		^a 1
Reinstatements	3		
Discharges			
Own request	22	3	^b 8
Good of service	4		
For incapacity		1	
Transfers:			
From department	5		^c 1
To department	4		

^a Mechanic.

^b 1 captain, 1 lieutenant, 1 mechanic, 1 lineman, 3 first-class engineers, 1 second-class engineer.

^c 1 first-class engineer.

Promotions:

Lieutenant to captain	1
Firemen, first class, to lieutenant.....	2
Firemen, first class, to engineers, first class.....	4

Leave of absence:

Accrued	32
Vacation	90
Without pay	8

EQUIPMENT.

The apparatus of the department at the present time consists of the following: Six steam fire engines, 1 motor fire engine, 1 gasoline fire engine, 4 chemical engines, 2 hook-and-ladder trucks, 8 hose wagons, 2 fuel wagons, 1 chief's automobile, and 1 chief's buggy, which are stationed as follows:

Engine company No. 1, chemical engine company No. 1, and hook-and-ladder company No. 1, at San Nicolas fire station, Calle Madrid, near the water front.

Engine company No. 2, fuel wagon No. 1, hose wagon No. 8, and chief's automobile, at Santa Cruz fire station, Calles Enrile and Alcala.

Engine company No. 3, chemical engine company No. 3, fuel wagon No. 2, and deputy chief's buggy, at Paco fire station.

Engine company No. 4 and chemical engine company No. 4, at Intramuros fire station, Plaza McKinley, Walled City.

Engine company No. 5 (motor engine), chemical engine company No. 2, and hook-and-ladder company No. 2, at Tanduary fire station, calles Concordia and Romero Aquino.

Engine company No. 6, at Tondo fire station, calles Sande and Lorenzo Chacon.

Engine company No. 7, at San Lazaro fire station, Calle Cervantes.

The general equipment of the department is in first-class condition, excepting the old Merryweather engine, installed at Tondo station. This engine will be replaced by the fourth-size Metropolitan engine, formerly installed at Tanduary station.

The department has in service 23,600 feet of 2½-inch fire hose, of which 20,000 feet is in first-class condition and 3,600 feet in a serviceable condition.

NEW APPARATUS.

During the year, a Webb combination motor fire engine and hose wagon was installed at Tanduary station. It has a pumping capacity of 900 gallons of water per minute, and carries 7 men, 1,000 feet of hose, and two 14-foot ladders. As proposed in previous reports, this engine answers all first alarms from the district of Santa Mesa, which has heretofore been inadequately protected on account of the lack of sufficient apparatus. The horse-drawn engine formerly stationed at Tanduary station, could make the run to Santa Mesa Heights in ten minutes, while the new motor engine can make it in one-third that time. The motor has not been in service long enough to make a comparison of the cost of maintaining motor engines with that of maintaining horse-drawn engines, but it is already obvious that all expectations as to the saving to the city by the installation of the new apparatus will be realized.

FIRES.

One hundred and two fires occurred in the city during the year, which is a decrease of 23 in comparison with the number for the fiscal year 1909.

The total fire loss during the year is estimated at approximately ₧1,215,980, which is a larger loss than the city has sustained in any year since 1903. The estimated loss for the year was approximately 9.9 per cent of the value of the property involved by the fires. The insurance loss for the year was approximately one-fourth of 1 per cent of the amount of insurance involved.

All fires were carefully investigated. The following were found to be among the principal causes:

Lighted cigarettes	11
Defective flues	10
Explosion of oil stoves.....	7
Suspected incendiary	6

INSPECTIONS.

Regular inspections of each district were made by the proper officers, and fire hydrants were inspected monthly by opening the plugs and flushing out the valves.

STATION BUILDINGS.

The buildings occupied by this department, with a few exceptions, are in first-class condition. The expenditure of ₧12,700, as recommended in the estimates of appropriation, will put all the buildings in good condition.

ELECTRICAL DIVISION.

The regular force of the electrical division consists of 1 city electrician and 3 linemen.

With the increase in volume and importance of the work of this division, there are now six branches into which it is divided. They are maintenance of fire and police alarm systems; outside construction; electrical inspections; electrical testing; installation and repair work; street lighting.

FIRE-ALARM SYSTEM.

All boxes were inspected, cleaned, and moth balls placed in each one; grounds were placed on all boxes as a protection to the mechanism against lightning as well as a safeguard to any person coming in contact with the box when the line might be in contact with some high-tension circuit. The system is in an entirely satisfactory condition and has given very little trouble during the past year, as the copper circuits which have been installed have done away with a large number of open

circuits, and grounds on the system have been reduced to a minimum. The system was extended to the new Government piers and to the quartermaster's dock, one box having been installed at each of these docks at a total construction cost of ₱1,192.49. One new box was also installed on Calle Leveriza, Malate.

Fifty-four alarms were received over the system during the year, all in a satisfactory manner.

POLICE-ALARM SYSTEM.

The police-alarm system was extended to the new Government docks and quartermaster's dock, and three new boxes were installed. Two new boxes were installed in Santa Ana, two in Paco, and one in the Luneta precinct. Owing to the severe usage to which it is constantly subject, this system requires a large amount of repair work and constant and careful attention to keep it in condition. Every box was inspected and tested at least once every three months, and the station apparatus, including storage batteries, switchboards, etc., thoroughly overhauled during the year.

OUTSIDE CONSTRUCTION WORK.

In connection with the outside construction work, two circuits of the fire-alarm system were reconstructed with copper wire, replacing the iron wire previously in use. One hundred and ninety-two new poles were set, and a large amount of reconstruction work was done in replacing old poles, cross-arms, pins, etc., and general repairs to lines.

There are now 1,240 city poles, of which the Philippine Islands Telephone and Telegraph Company shares in the use of 856, from which a revenue of ₱2,439.25 was derived during the past year. This is an increase of ₱1,133.27 over the previous year, and largely due to the new contract entered into June 23, 1909.

INSPECTIONS.

Four thousand seven hundred and sixty-four inspections of new electrical work were made during the year, the fees for which amounted to ₱7,028.42. This is an increase of ₱1,789.90, or 34 per cent, over the previous year. Also, 826 old installations have been inspected, 89 of which were condemned and 6 disconnected for not making the necessary repairs. The assignment of a small automobile to the city electrician has produced a marked improvement. It has made possible a larger number of inspections and a corresponding increase in receipts. The electrician is able to perform his duties to the public with less delay and to have better control over his own division.

ELECTRICAL TESTING.

The following is a list of the electrical apparatus installed and inspected during the past year:

Incandescent lights	9,492
Arc lights	23
Arcs for moving-picture machines	15
Motors	70
Fans, electric ceiling	150
Compensators	34
Transformers	3
Mercury rectifiers	3
Dynamos	2
Switchboard	1
Electric bells	34
Annunciators	5
Telephones	764

One thousand one hundred and ninety-eight meters were tested in accordance with section 321, chapter 19, Revised Ordinances. Nine meters tested at consumers' request and 4 meters tested for evidence in court. Of the meters tested at consumers' request, 4 were found more than 3 per cent fast and 5 correct within 3 per cent. Photometric tests have been made on various kinds of lamps to obtain their candle-power as well as their length of life and efficiency. Voltage tests have been made in various parts of the city in an effort to keep the consumer supplied with the proper voltage, which is an important consideration in connection with the tungsten lamp. As a result of the electrolysis tests which were pursued last year, the city water-pipe system has been connected to the ground return of the electric railway system at four points on Marquez de Comillas. It is believed that the danger from this source is now very largely eliminated, but a strict watch is being kept and frequent tests made to discover any further signs of electrolysis.

INSTALLATION AND REPAIR WORK.

In connection with installation and repair work, considerable attention was given to the remodeling of the lighting layouts of a number of city buildings, to adapt them to a reduced number of larger lighting units made possible by the use of the tungsten lamp. Some most satisfactory results were obtained and the expense of lighting was materially reduced, and, at the same time, much more satisfactory illumination secured. The usual amount of work in connection with repairs to electrical apparatus, rewinding fan motors, etc., was done during the year.

PUBLIC LIGHTING.

Since the city is now spending \$125,000 per year for public lighting, it is evident that utmost importance must be given to the problem of obtaining the greatest efficiency. The most careful and exhaustive study was given to the choice of the type of light as well as the best locations, and this has resulted in the development of a most efficient layout of the street-lighting system.

In determining the location of new street lights and readjustment of existing lights the office of the city electrician closely coöperated with the police department. Each precinct commander was required to carefully study his district and make a report on illumination improvement. Thus the final locations were minutely checked.

The revised plan for street lighting submitted to the Board during May, 1910, called for 199 incandescent and 11 arc lights in addition to the 534 arcs and 10 incandescents already in service. The incandescent lights mentioned on the plan are of the type known as "series tungsten," which give a very effective illumination. These additional lights were approved by the Board near the end of the fiscal year, and steps were immediately taken to begin the installation of same.

The 6.6 ampere inclosed alternating current arc is used for the illumination of the principal streets as well as other streets which are straight and wide enough to make this light efficient. The 6.6 ampere series tungsten lamp was selected for use on small side streets, on narrow and crooked streets, and on streets where overhanging trees render the arc very inefficient. This new incandescent lamp is to be used with a radial wave reflector, and when so used gives a candlepower of 70 at from 8 to 25 degrees below the horizontal.

The new plan for street lighting for the fiscal year 1911 contains nearly 1,000 street lights.

FIRES DUE TO DEFECTIVE WIRING.

Inasmuch as it is quite common for newspapers to report fires as being due to defective wiring, the following investigations with reference to the fires of the past year are published. Of the 102 fires recorded, 24 were from unknown causes. In the 88 cases where the cause of the fire was known, 3 fires were due to electric wires. Two of these, however, were outside wires not in any building. The third fire was due to some electric-bell wires installed without a permit. Of the 24 fires the causes of which were unknown it can be definitely stated in many cases that electric wires were not the cause, since there were no wires in the building, or other reasons equally certain, and in no case is there any reason for supposing that the fire was due to electrical causes.

SPECIAL INVESTIGATION.

During the year, the Municipal Board sent the city electrician to Europe and the United States on a mission to study the best lighting

and power systems and municipal control of franchises. This investigation included the question of electric-lighting rates; the proper voltage and allowable fluctuation in voltage, especially with reference to the tungsten lamp, which has of late become such an important factor in electric lighting; the question of street lighting, with special reference to the availability of the tungsten lamp as well as other improved types of street lights; an investigation of the work of public service commissions, which have, of late, become such an important factor in the proper regulation of public-service corporations; and also an investigation of the question of street-car fenders. During five months of travel, some fifteen cities in Europe and America, best suited to a study of the respective subjects under consideration, were visited. A report was submitted to the Municipal Board covering the entire investigation, with recommendations in regard to the various questions under study. It is believed that the carrying out of these recommendations will satisfactorily solve these troublesome questions, and a large saving in the cost of lighting, and numerous other advantages be realized by the citizens of Manila. This investigation was also most opportune in another sense quite unforeseen at the time, since, in the study of public-service commission work, a large amount of data was collected dealing with legislation, municipal ordinances, inspections, tests, rate investigations, etc., with reference to gas companies. This has recently been found most useful, and should prove even more valuable in the future, in view of the fact that a gas company is now seeking a franchise to operate in Manila.

REMARKS.

Provision has been made in the appropriation for this department for the fiscal year 1911, for the purchase of another motor fire engine and hose wagon, which it is intended to install at Paco fire station, to more adequately protect the districts of Malate and Santa Ana.

Deputy Chief Clarence F. Samuelson was authorized to represent the city of Manila as a delegate to the annual convention of the National Association of Fire Engineers, held at Grand Rapids, Mich., August 17 to 20, 1909. He was received with great courtesy and given every opportunity to become familiar with the most up-to-date methods of department organization and the latest fire-fighting apparatus. The proceedings of the convention were both interesting and instructive. Deputy Chief Samuelson continued his inspection to include the departments of several other cities of the United States and certain manufacturing centers. It was largely on his recommendation that the Webb motor fire engine, now in service in this department, was purchased.

Attention is invited to the appendixes attached hereto, giving detailed information regarding fires, alarms, etc.

APPENDIX A.

Fires.

Month.	Fires.	Value.		Insurance.		Loss.		Insurance loss.	
		Buildings.	Contents.	Buildings.	Contents.	Buildings.	Contents.	Buildings.	Contents.
July	11	₹269,700	₹125,400	₹53,000	₹12,000	₹88,00	₹454.00	₹63	₹300
August	3	38,150	3,950	20,000	1,500	152.00	50.00	1	
September	2	1,200	4,000				1.00		
October	8	238,500	110,300					5	70
November	8	42,260	54,735	23,000	21,500	105.00	87.50		
December	13	566,342	6,042,915	1,000	4,200	42.00	34.50		
January	11	1,141,964	1,357,018	390,000	679,500	70,072.00	27,953.50		
February	11	48,135	12,750	10,500		373,308.50	697,272.50	288,400	376,824
March	11	242,735	233,450	130,000	96,200	12,219.00	9,350.00	4,004	
April	11	194,520	87,070	44,000	7,000	6,155.00	11,279.50	6,015	8,086
May	5	91,550	77,230	5,000	41,200	1,053.00	474.00	20	5
June	11	370,685	903,550	220,000	815,500	2,334.00	1,445.00	1,070	800
Total	102	3,245,741	9,018,968	901,500	1,678,600	467,678.50	748,301.50	299,578	386,085
Fiscal year 1909	125	2,467,793	12,973,465	868,350	643,900	154,576.20	187,876.25	80,886	93,053
Fiscal year 1908	125	3,659,627	1,067,468	524,200	405,440	136,943.70	123,573.92	41,690	73,455

APPENDIX B.

Buildings in which fires occurred, how occupied.

Automobile garages	3
Automobiles in street	3
Bowling alley	1
Brush, burning	3
Carnival grounds	1
Court-house	1
Colleges	2
Dance hall	1
Distillery	1
Dwellings	49
Electric wires in street.....	1
Factories, match	2
Factory, sausage	1
Factory, shoe	1
Factory, umbrella	1
Hospitals	3
Hotels	4
Laundry	1
Office	1
Police stations	2
Restaurant	1
Saloon	1
Sawmills	2
Stores, grocery	2
Store, shoe	1
Tienda	1
Vacant house	1
Vessels in river and harbor.....	3
Warehouses	3

Construction of buildings where fires occurred.

Strong material	61
Mixed material	6
Light material	20

APPENDIX C.

Alarms.

Alarms from street boxes.....	50
Still alarms (telephone and verbal).....	23
Alarm over auxiliary alarm system (Fort Santiago and San Lazaro Hospital)	1
False alarms:	
Boxes	3
Still	1
Auxiliary	1
Total false alarms	5
No alarms (fire department not called).....	23
Total	102
Special calls for additional engines.....	4
Second alarms	4
General alarm	1

APPENDIX D.

Classification of licenses.

STORAGE.

Acids	4
Alcohol	4
Almaciga	1
Benzine	2
Calcium carbide	14
Carbolineum	1
Ammunition	5
Dryer	1
Elemi	3
Ether	3
Fireworks	20
Gasoline	31
Glycerine	2
Grease	1
Gums	2
Matches	40
Miscellaneous chemicals	1
Naphtha and naphthaline	3
Oils	163
Paints	9
Pitch or brea	16
Powder	1
Resin	33
Tar and tarcoline	32
Turpentine	42
Varnish	8
Wax	1

MANUFACTURE.

Lime	6
Matches	1
Oils	6
Pottery	1
Foundry	28
Theater and cinematograph	20

APPENDIX E.

Comparative statement of annual fire losses in the city of Manila since the organization of the present fire department.

Fiscal year:

1902	₱50,085.00
1903	1,670,649.90
1904	468,911.00
1905	135,931.00
1906	76,034.80
1907	677,709.00
1908	280,516.62
1909	342,452.45
1910	1,215,980.00

DEPARTMENT OF ASSESSMENTS AND COLLECTIONS.

The department of assessments and collections is operated by the Bureau of Internal Revenue, the Collector of Internal Revenue being ex officio city assessor and collector for the city of Manila. Said Bureau of Internal Revenue is reimbursed by the city to cover the estimated expense for such service, which, for the fiscal year 1910, amounted to the sum of ₱100,000.

The following data are compiled from the annual report of the said ex officio city assessor and collector:

REAL-ESTATE TAX.

The total appraised value of all land and improvements thereon in the city of Manila, as shown by the 1910 rolls, is ₱128,793,926, of which property valued at ₱46,197,528 is exempt from taxation by reason of its being used for religious, charitable, scientific, or educational purposes and not held for profit or because of its belonging to some branch of the Government.

The exempt property may be classified as to ownership as follows:

Churches and religious orders.....	₱15,367,998
Educational and scientific institutions.....	64,817
Various branches of the Government.....	30,764,713

The total value of taxable real estate in the city, as shown by the 1910 tax rolls, is ₱82,596,398, which is ₱683,782 more than shown by the 1909 tax rolls.

There are 2,292.8 hectares of land assessed for taxation, at a total value of ₱44,734,555, an average of ₱19,500 per hectare or ₱1.95 per square meter. The lowest rate at which land is appraised for taxation is 6 centavos per square meter, and the highest is ₱100 per square meter. The total value of buildings assessed for taxation is ₱37,861,843.

The value of new buildings erected during each calendar year from 1903 to 1909, inclusive, was—

1903	₱3,784,320
1904	3,489,846
1905	2,682,606
1906	1,594,506
1907	1,001,745
1908	1,022,538
1909	1,009,742

The board of tax appeals heard 268 appeals involving property valued for taxation at ₱7,404,642. The assessed value of 74 properties was reduced in the total sum of ₱222,647, and the assessed value of 16 properties was increased in the total sum of ₱31,380, leaving a net reduction by the board of tax appeals of ₱191,267.

Real-estate taxes to the amount of ₱1,291,129.62 were collected during the fiscal year, as compared with ₱1,261,236.45 collected during the fiscal year 1909, an increase of ₱29,893.17.

The increase in current collections, as compared with the fiscal year 1909, is ₱14,103.26; as compared with the fiscal year 1908, ₱20,383.08; and as compared with the fiscal year 1907, ₱40,805.95.

The following statement shows the amount of real-estate tax, penalty, and interest paid during the fiscal year 1910 for each of the years from 1904 to 1910, inclusive, and also the tax satisfied by other means than cash payments:

Due for the calendar year—	Tax satisfied.		
	Tax.	Penalty and interest.	Total.
1904	₱60.00		₱60.00
1905	466.75	₱177.37	644.12
1906	2,078.36	279.64	2,358.00
1907	5,082.84	1,290.40	6,373.24
1908	39,829.34	9,754.45	49,583.79
1909	438,968.56	14,087.09	453,055.65
1910	782,136.49	2,024.16	784,160.65
Total	1,268,622.34	27,613.11	1,296,235.45

Credits allowed:

Under Acts 975 and 1420..... ₱5,105.83

Actual cash collections 1,291,129.62

Total 1,296,235.45

The tax levy of $1\frac{1}{2}$ per cent on assessed valuation of ₱82,596,398, yields a total tax for the calendar year 1910 amounting to ₱1,238,945.97.

The following comparative statement shows the amount of delinquent taxes outstanding on June 30, 1906, June 30, 1907, June 30, 1908, June 30, 1909, and June 30, 1910:

Due for calendar year—	On June 30—				
	1906	1907	1908	1909	1910
1901	₱410.02	₱15.86	₱15.00		
1902	2,367.64	115.02	50.16		
1903	5,646.60	207.16	29.94		
1904	20,034.29	1,076.36	168.65	₱60.00	
1905	64,356.35	3,577.94	1,228.51	466.75	
1906		53,658.53	5,679.17	2,078.26	
1907			44,062.88	5,082.84	
1908				44,535.25	₱3,441.61
1909					31,293.86
Total	92,814.90	58,650.87	51,234.31	52,223.10	34,735.47

As will be noted, all taxes due for the calendar years 1901 to 1907, inclusive, were collected prior to June 30, 1910.

MATADERO.

The collections from this source during the fiscal year amounted to ₱190,257.42, as compared with ₱183,784.11 during the fiscal year 1909, resulting in an increase of ₱6,473.31.

There were slaughtered and removed from the matadero for consumption 89,938 animals, weighing, dressed, 6,341,914 kilos, as compared with 90,196 animals, weighing, dressed, 6,126,137 kilos, slaughtered and removed during the fiscal year 1909.

The Islands furnish very few cattle for this purpose, and until recently Hongkong, Saigon, and Cochin China were the only markets from which importations of cattle were received. During the latter part of May an importation of large Australian cattle was received, and a large number of them were slaughtered during the month of June. The average weight of dressed beef carcasses removed from the matadero during the month of June was over 10 per cent greater than during the previous eleven months, due to the introduction of these large cattle. The importation and slaughter of these Australian animals has had the effect of materially reducing the price of fresh meat sold in the public markets.

The following comparative statement shows the number and kind of animals slaughtered and removed for consumption, the weight of dressed meat, and the fees collected, at the rate of 3 centavos per kilo on dressed meat, during the fiscal years 1906 to 1910, inclusive.

Fiscal year.	Cattle.		Hogs.		Sheep.		Total.		Fees collected.
	Number.	Weight.	Number.	Weight.	Number.	Weight.	Number.	Weight.	
		<i>Kilos.</i>		<i>Kilos.</i>		<i>Kilos.</i>		<i>Kilos.</i>	
1906	18,308	2,662,366	53,472	2,672,446	12	163	71,792	5,334,975	P160,049.25
1907	20,636	2,668,144	55,283	2,828,735	224	1,872	76,145	5,498,751	164,962.53
1908	26,245	3,028,219	58,329	2,858,057	376	2,758	84,950	5,889,034	176,671.02
1909	28,414	3,264,120	60,741	2,854,446	1,041	7,571	90,196	6,126,137	183,784.11
1910	25,729	3,430,814	63,177	2,903,038	1,032	8,062	89,938	6,341,914	190,257.42

PUBLIC MARKETS.

The total market collections for the year amounted to P278,736.85, as compared with P262,765.50 collected during the fiscal year 1909, resulting in an increase of P15,971.35, or about 6 per cent more than was collected during the previous year.

The following statement shows the collections in each market during the fiscal years 1908, 1909, and 1910:

Name of market.	Total, year ended June 30—		
	1908	1909	1910
Divisoria	P156,109.35	P140,614.55	P148,434.00
Quinta	73,001.45	70,159.50	71,583.45
Arranque	26,722.35	25,654.40	28,254.65
Herran	12,165.00	11,920.70	15,244.90
Sampaloc	9,235.05	9,551.70	9,495.75
Anda	1,439.25	1,510.05	1,783.10
Santa Ana	1,498.20	1,323.90	1,525.95
Gagalangin	1,121.45	1,029.25	1,376.45
Pandacan	1,201.00	1,001.45	1,037.80
Total	282,493.10	262,765.50	278,736.85

MUNICIPAL LICENSES.

The following comparative statement shows receipts from the issue and transfer of the different classes of municipal licenses and permits and sale of vehicle equipment during the fiscal years 1908, 1909, and 1910:

Class of license.	Fiscal year—		
	1908	1909	1910
Liquor	₹162,329.50	₹164,593.70	₹157,968.24
Business (license and permit)	22,949.01	30,583.03	31,653.59
Dog	6,250.05	8,215.53	16,765.42
Peddler	9,063.00	8,302.00	8,951.00
Entertainment	9,601.00	11,554.50	14,410.00
Public vehicle	14,340.00	15,319.00	13,908.00
Sales of vehicle equipment	1,439.10	1,196.20	1,042.40
Total	225,971.66	239,763.96	244,698.73

The receipts from liquor licenses have decreased steadily during the past five years, with the exception of a slight increase during 1909 over the preceding year.

The receipts from business licenses and permits were practically the same during the period covered by this reports as during the preceding year.

The annual fees for dog licenses were reduced, effective January 1, 1910, from ₹6 for female dogs and ₹4 for male dogs to ₹4 for female dogs and ₹2 for male dogs. Notwithstanding this reduction in fees, the total receipts from dog licenses were more than twice as great during the fiscal year 1910 as during the previous year.

The receipts from entertainment licenses were almost wholly from dance halls. There were over 4,700 public dance functions during the year, or about 1,000 more than during the fiscal year 1909. By a resolution of the Municipal Board, effective July 1, 1910, public dance functions are restricted to Saturdays, Sundays, holidays, and eves of holidays.

The decrease in receipts from public-vehicle licenses is due to the fact that during the past several months all licenses of this class have been issued for periods of less than one year. This was done for the purpose of having all vehicle licenses expire on November 30, so that a distinctive number plate on public vehicles may be used for each year. On June 30, 1910, there were in the city 3,000 public vehicles and 420 livery vehicles licensed for passenger traffic, as compared with 2,668 public vehicles and 295 livery vehicles on the same date of the previous year. Of the 420 livery vehicles on June 30, 1910, 54 were automobiles.

The following comparative statement shows the different kinds of

municipal liquor licenses in force on June 30 of the years 1906, 1907, 1908, 1909, and 1910:

Liquor licenses.	1906	1907	1908	1909	1910
Bar:					
First class.....	46	37	36	34	33
Second class.....	43	37	34	35	35
Restaurant:					
First class.....	18	15	18	18	18
Second class.....	12	11	10	10	7
Hotel:					
First class.....	2	2	2	3	2
Second class.....					
Theater.....	3	1	1	1	1
Wholesale:					
First class.....	29	38	34	39	39
Second class.....	3	4	2	6	3
Third class.....	3	4	3	4	5
Grocery.....	72	73	76	79	77
Druggist.....	3	4	4	6	10
Distiller.....	8	8	7	11	11
Brewer.....	1	1	1	1	1
Native wine.....	1,309	1,319	1,301	1,272	1,259
Total.....	1,552	1,554	1,529	1,519	1,501

NOTE.—The above does not include clubs which pay license taxes for the privilege of serving liquors to members, and of which there were licensed 23 in 1906, 10 in 1907, 25 in 1908, 20 in 1909, and 18 in 1910.

The following comparative statement shows the number of business licenses and permits and public-vehicle licenses in force on June 30 of the years 1907, 1908, 1909, and 1910:

Class of license or permit.	1907	1908	1909	1910
Business licenses.....	1,466	1,503	1,518	1,729
Business permits.....	2,493	3,049	3,119	3,211
Public-vehicle licenses.....	3,005	3,156	3,444	3,930

Appendix A shows the actual number of the different kinds of municipal licenses and permits issued during the year.

CATTLE REGISTRATION.

On February 1, 1909, Municipal Ordinance No. 106, entitled "An ordinance requiring the registration of all large cattle kept within the city of Manila, and repealing General Orders, No. 18, issued by the provost-marshal-general, October 14, 1898," became effective. This ordinance provides for two kinds of cattle registration—one to be covered by the issue of certificates of ownership and one to be covered by the issue of certificates of registration. Certificates of ownership are issued only for animals duly branded with owners' registered private brands and brand of the city of Manila, while certificates of registration are issued (for horses, mules, and asses only) without requiring the branding of animals.

By the provisions of the ordinance cattle owners were given until August 1, 1909, to register their animals without incurring the penalties provided. Therefore comparatively few animals were registered prior to the close of the fiscal year 1909.

During the fiscal year 1910, 12,042 certificates of ownership and 5,711 certificates of registration were issued, at a uniform fee of ₱1, making the total collections for the year ₱17,753, an increase of ₱10,643.60 over the collections made during the preceding year.

RENTALS OF CITY PROPERTY.

During the period covered by this report there has been collected as rentals for the use of city property the sum of ₱21,333.22, as compared with a collection of ₱19,830.30 during the fiscal year 1909, an increase of ₱1,502.92.

There was collected during the year the sum of ₱1,754.51 as rent for the use of city telephone poles, as compared with ₱1,296.28 from the same source during the fiscal year 1909.

On June 30, 1910, there were 119 tenants of city properties, occupying 108 sites.

SALES OF CITY PROPERTY.

During the fiscal year ten pieces of city land were sold. Including deferred payments made on properties sold during prior fiscal years, the total collections under this head during the year amounted to ₱41,918.78, as compared with ₱15,550.93 during the preceding year.

WEIGHTS AND MEASURES.

The Weights and Measures Law, Act No. 1519, Philippine Commission, has been in operation in the city of Manila since March 1, 1907. Commencing January 1, 1909, scales, balances, weights, and measures in the metric system only have been sealed.

During the fiscal year covered by this report there were sealed in the city metric scales and measures as follows:

Linear measures	1,689
Dry and liquid measures.....	16,467
Steelyards	1,781
Platform scales	495
Balance scales	748
Total	21,180

The receipts from this source are shown under internal-revenue dividends.

PAIL-CONSERVANCY SYSTEM—WATER RENTS—BUILDING PERMITS—BOILER
INSPECTION—ODORLESS EXCAVATOR SERVICE.

These charges are collected by this office upon assessment rolls prepared by the departments of engineering and public works and of sanitation and transportation, city of Manila. The following statement shows receipts from these sources during the fiscal years 1909 and 1910:

Item.	1909	1910
Water rents	₱251,725.54	₱274,976.35
Pail system	65,859.40	69,244.31
Odorless excavator service	21,882.00	21,833.00
Building permits	16,031.18	17,524.01
Boiler-inspection fees	1,050.00	2,435.00
Total	356,548.12	386,012.67

FEEs, FINES, COSTS, ETC.

Costs, fines, fees, etc., were collected or received under the provisions of section 61 of the Municipal Charter from the several officials charged with their collections. The amounts received from these sources during the fiscal years 1909 and 1910 were as follows:

Item.	1909	1910
Municipal court collections	₱67,007.83	₱93,614.95
Sheriff's fees	11,381.86	10,229.38
Justice of peace fines and fees	4,828.40	4,828.60
City attorney's fees	5.12	95.86
Pound receipts	5,130.55	5,569.67
City electrician's fees	5,005.76	6,834.80
Cementerio del Norte	12,823.96	12,029.00
Secretary of Municipal Board fees	49.50	93.50
Rent of niches	8,813.00	8,700.00
Burial permits	5,126.10	4,409.20
Total	120,172.08	146,404.96

TRANSPORTATION OF MEAT.

Receipts under this head are for services rendered by the city for delivering meat from the slaughterhouse to the various markets in the city, at the rate of ₱0.07 per quarter. There were collected during the fiscal year 1910, ₱10,580.36, as compared with ₱10,752.49 collected during the fiscal year 1909, a decrease of ₱172.13.

INTERNAL-REVENUE DIVIDENDS.

This source of revenue to the city of Manila during the year comprised :

- (1) The ordinary cedula tax collected in the city;
- (2) The entire receipts for internal-revenue licenses issued for the maintenance in Manila of theaters, museums, concert halls, pawnbrokers, circuses, and billiard rooms;
- (3) Manila's share in proportion to its population of the 30 per cent of the revenue apportioned under the provisions of the Internal Revenue Law for use of provincial and municipal governments;
- (4) The entire receipts collected as fees for the testing and sealing of weights and measures in Manila; and
- (5) The road and bridge fund, consisting of the additional cedula tax imposed for this purpose and Manila's share of the 10 per cent of the revenues apportioned for the use of provinces that adopted the provisions of Act No. 1652, Philippine Commission.

The following is an itemized statement of the revenues from this source during the fiscal years 1909 and 1910:

Item.	1909	1910
Regular cedula tax.....	₱63,003.00	₱87,603.00
Receipts from certain license taxes.....	10,577.50	15,515.00
Manila's share of the 30 per cent apportionment.....	66,029.97	68,055.99
Weights and measures fees.....	10,006.65	8,979.85
Road and bridge fund:		
Additional cedula tax.....	57,910.00	81,158.00
Manila's share of the 10 per cent apportionment.....	24,789.77	24,416.29
Total.....	232,316.89	285,728.13

FRANCHISE TAX.

By the provisions of its charter, the Manila Electric Railroad and Light Company pays to the city of Manila $2\frac{1}{2}$ per cent of its gross earnings from fares collected, tickets sold, and electric light and power sold. In consideration of the payment of this franchise tax the company is exempted from the payment of all other taxes except the real-estate tax. This company is the only concern paying franchise taxes to the city.

The collection from this source during the fiscal year amounted to ₱53,738.42, as compared with ₱49,972.17 during the fiscal year 1909.

TOTAL COLLECTIONS.

The total collection of city taxes, fees, charges, etc., during the fiscal year amounted to ₡2,975,103.68, as compared with ₡2,765,851.18 during the fiscal year 1909 and ₡2,859,318.03 during the fiscal year 1908, an increase, as compared with the fiscal year 1909 collections, of ₡209,252.50, as per statement following:

Comparative statement of collections by the city assessor and collector during the fiscal years 1909 and 1910.

Item.	1909	1910
Land tax	₡1,261,236.45	₡1,291,129.62
Franchise tax	49,972.17	53,738.42
Internal-revenue dividends:		
Regular	66,029.97	68,055.99
Licenses and cedulas	83,587.15	112,097.85
Secretary, Municipal Board	49.50	93.50
Live-stock registration	7,103.40	17,753.00
Vehicle equipment	1,196.20	1,044.40
Municipal court	67,007.83	93,614.95
Sheriff's fees	11,381.86	10,229.38
Justice of peace fees	4,828.40	4,828.60
City attorney	5.12	95.86
Miscellaneous, law department	180.00	
Building permits	16,031.18	17,524.01
Boiler-inspection fees	1,050.00	2,435.00
Water rents	251,725.54	274,976.35
Sales, city property	15,550.93	41,918.79
Rents, city property	19,830.30	21,333.22
Rent, telephone poles	1,296.28	1,754.51
Road and bridge cedulas	57,910.00	81,158.00
Road and bridge internal-revenue dividends	24,789.77	24,416.29
Licenses	238,567.76	243,656.33
City electrician	5,005.76	6,834.80
Matadero	183,784.11	190,257.42
Transportation of meat	10,752.49	10,580.36
Markets	262,765.50	278,736.85
Pail system	65,859.40	69,244.31
Excavator service	21,882.00	21,833.00
Cementerio del Norte	12,823.96	12,029.00
Rent of niches	8,813.00	8,700.00
Burial fees	5,126.10	4,409.20
City pound	5,130.55	5,569.67
Miscellaneous, department of sanitation and transportation	4,572.50	5,055.00
Total	2,765,851.18	2,975,103.68
Net gain for the fiscal year		209,252.50

APPENDIX A.

Statement showing the actual number of the different kinds of municipal licenses and permits issued in the city of Manila during the fiscal year ended June 30, 1910, not including transfers.

[Except as otherwise shown by footnotes, all licenses were issued for periods of one year. Number issued for fiscal year 1909 is also shown.]

Class.	1910	1909	Class.	1910	1909
LIQUOR LICENSES.			Mercantile and collecting agency		
Bar:			Merry-go-round ⁶	6	3
First class ¹	64	73	Master plumber	22	26
Second class ¹	72	73	Public warehouse	8	8
Restaurant:			Parade, circus ⁴	1	4
First class ¹	38	37	Peddler ⁵	2,669	2,762
Second class ¹	16	21	Restaurant:		
Hotel:			Class A	78	83
First class ¹	4	6	Class B	209	204
Second class ¹			Class C	452	392
Theater ²	43	44	Race track	1	1
Wholesale:			Race meet	28	25
First class	37	38	Storage of combustible material	266	236
Second class	3	6	Slot machine	10	37
Third class	5	4	Shooting gallery	5	4
Grocery	81	79	Shipping and intelligence office	8	5
Distiller	11	11	Tattooer	13	7
Druggist	10	6	Public vehicles	3,601	3,334
Brewer	1	1			
Native wine ³	2,522	2,567	BUSINESS PERMITS.		
BUSINESS LICENSES.			Aerated water manufacture	16	18
Auctioneer	5	6	Boiling and refining sugar	35	34
Barber shop	515	519	Boiling fat	19	21
Bill-posting and advertising agency	4	11	Boiling oil	6	6
Boarding house:			Billiard table	203	150
Class A	17	11	Sale of candy and bakery products	2,544	2,379
Class B	13	7	Canning and preserving fruit	14	17
Bowling alley	1	1	Candle manufacture	17	5
Boarding stables			Cinematograph	17	5
Club:			Drying and selling fish	39	36
Class A	10	8	Dairy products	15	17
Class B	14	18	Dressing hides	2	1
Class C	9	8	Electrical contractor	17	18
Detective agency		2	Fruits and vegetables	56	62
Dogs ³	7,953	2,117	Ferryboat	207	181
Dance hall ⁴	4,560	3,718	Foundry	28	29
Dyeing and cleaning shop	10	16	Grocery store	259	246
Embalmer	4	3	Leather tanning	9	9
Hotel:			Lime manufacture	7	5
Class A	13	9	Match manufacture	1	1
Class B	7	1	Pawnbroker	32	34
Juggler, acrobat, and fortune teller ⁵	6		Parade, other than circus ⁴	495	120
Junk shop	44	51	Pottery manufacture	1	1
Laundry	30	31	Sale of fresh meat	4	4
Lodging house:			Soap manufacture	58	48
Class A	2	9	Stock yard	3	4
Class B	4	9	Second-hand shop	87	101
Livery stable	83	57	Theater	17	18
			Undertaker	27	
			Total	27,809	20,280

¹ Issued for periods of six months.

² Issued for periods of one week.

³ Issued for fractional parts of year to expire on December 31 of year in which issued.

⁴ Issued for one day.

⁵ Issued for periods of three months.

⁶ Issued for periods of one month.

DEPARTMENT OF SEWER AND WATERWORKS CONSTRUCTION.

In accordance with the directions of the Municipal Board this department, on May 1, 1910, ceased to exist independently and was made a division of the department of engineering and public works.

This decision of the Board was due to the fact that on the date indicated the work of construction of the gravity water-supply system and of the sewer system was practically completed.

J. F. Case, formerly chief engineer of this department, submitted to the Board, on May 19, 1910, his final report, which indicates the condition, on said date, of the several works carried out by this department. The report is as follows:

The department was organized in March, 1905, by virtue of Act No. 1323 of the Philippine Commission, with the undersigned as chief engineer. Previous to this date preliminary studies had been made of the water system by the undersigned and of the sewer system by Mr. O. L. Ingalls. From these studies plans were prepared, and in February, 1904, Mr. Desmond Fitzgerald, past president of the American Society of Civil Engineers, examined the plans as consulting engineer. He approved the design for the water system in its entirety. In the sewer system plans he advised eliminating the proposed pumping station at Calle Herran, since the movement of the currents in the bay were likely to carry the sewage into the new harbor area. When this and some other minor changes were incorporated, he approved the sewer plans also.

Immediately after the formation of the department the undersigned proceeded with the preparation of the final plans and specifications. Proposals for the construction of the water system were invited on July 20, and for the sewer system on August 1, 1905. Bids were opened for the water system on January 2 and for the sewer system on January 12, 1906, and contracts were awarded as follows:

Water system.—For the dam and reservoir, to the Matson, Lord & Belser Company; for the steel-pipe line and tunnel conduit, to the Atlantic, Gulf and Pacific Company; for furnishing steel plates and rivets, to H. W. Peabody & Co.

Sewer system.—For the entire work, to the Atlantic, Gulf and Pacific Company.

Construction work was promptly started by all contractors. The Matson, Lord & Belser Company sublet the construction of the dam to Mr. Salvadore Farre and the reservoir to the Manila Construction Company. All other work was carried on by the contractors themselves. A road along the pipe line and conduit was built by administration, the work being necessary before any contracts could be let.

Briefly stated, the water system consists of an impounding and diversion dam constructed at a gorge in the Mariquina River Valley, whose elevation is sufficient to supply the city of Manila by gravity. This reservoir contains, approximately, 500,000,000 gallons of water in storage, which is sufficient to tide the city over a possible dry season when the yield of the stream itself might be deficient. The elevation of the top of this dam is 214 feet above city datum. This dam is constructed of cyclopean masonry, or concrete in which large stones are imbedded, all faced with cut limestone from the adjacent mountains. It is a gravity section; that is, of weight and strength sufficient to resist any water pressure to which it might be subjected. In addition, it is arched against the water pressure as a further precaution against earthquakes or other disturbance. At both ends it is built into the solid rock. It was anticipated that this dam could be founded on solid rock throughout its entire length, but for a short distance in the bed of the stream the ledge was lacking and it was necessary to place the foundations on

heavy boulders imbedded in clay, which experience proved to be impervious. The bed of the stream is approximately elevation 178, and the lowest point of the masonry is at approximately 142.

A sluiceway 5 feet square in section is provided through the dam, and a 36-inch cast-iron wasteway will remove any possible sediment from directly under the intake. The water may be drawn from four different elevations into the inlet well. From this well it is controlled by four sluice gates, 20 by 24 inches each. After passing these gates it enters the screen chamber, where, by means of a rotary screen, all fish, trash, etc., will be removed. Passing the screens, the water enters a riveted steel pipe, 42 inches in diameter, approximately $10\frac{1}{2}$ miles long. The first 900 feet is laid through a tunnel in the cliff forming the south side of the gorge, but from there on it was all laid in open trench. For the first 3 miles the pipe follows the river closely, but on reaching the broad Mariquina Valley it follows a straight line a distance of more than 12 miles to the reservoir. Under the Mariquina River a 36-inch cast-iron pipe is substituted for the steel pipe. On reaching the high grounds on the west side of the river, the pipe gives place to the masonry-lined tunnel conduit. Steel plates and rivets were furnished under contract by H. W. Peabody & Co., and the pipe was manufactured at the shops, built for the purpose, of the Atlantic, Gulf and Pacific Company. It was built in sections of six courses, approximately 6 feet long each, or 36 feet per section. From the shops these sections were transported by rail and wagon to the site of the trench, where they were riveted together by hand. A suitable number of air valves and blow-offs were provided and one standpipe.

After riveting the pipe, and before covering it, it was pumped full of water and subjected to not less than 75 pounds hydraulic pressure. Any leaks developing under this pressure were then recaulked and the line made satisfactorily tight. On completion of the pipe line a bulkhead was placed in its lower end, and the pipe was filled with water from the headworks and placed under its entire hydrostatic head, this being far in excess of any future requirement. Careful measurements of the leakage under these conditions were made, and the result was a gratifying proof of the excellence of the work.

The tunnel and conduit is a masonry-lined horseshoe section with a vertical diameter of approximately 5 feet. It has masonry-lined inclined shafts for points of entrance placed at about one-half mile intervals. Considerable difficulty was encountered in driving this tunnel on account of the excessive amount of ground water encountered, but it was successfully completed. The water discharges from this conduit into the distributing reservoir on the hills of San Juan del Monte. This reservoir has a capacity of approximately 50,000,000 gallons, is masonry-lined throughout, and is provided with controlling and discharge gates. One feature of its construction is that the conduit may be used as a bye-pass so that the reservoir may be emptied and cleaned without interrupting the supply of water to the city. From the distributing reservoir the water is conducted to the old Deposito through a continuation of the 42-inch steel-riveted pipe. Connection is made with the old Deposito, which is kept filled with water as an additional storage supply in case of necessity. In consequence there is at all times some 68,000,000 gallons of water available for city consumption. From the Deposito the distribution system proper begins. All pipes are of cast iron ranging in size from 42 inches to 4 inches in internal diameter. All parts of the city will be supplied. When the pipes are installed the system will afford a minimum pressure of 20 pounds at the street level in the most distant parts of the city under maximum consumption. In the design full use was made of the old distributing pipes, but these have been augmented and replaced as a careful study of the conditions showed necessary. The new gravity water supply will furnish 22,500,000

gallons of water daily to the city, sufficient for practically double the present population.

Because of the difficulties attendant upon the construction of the dam, and by reason of the outbreak of cholera in the fall of 1908, as well as for economy, a temporary intake was built above the dam and the use of the new water supply inaugurated on November 12, 1908. Since that date there has been no interruption of the new supply. This intake, although it has given good service, is not entirely satisfactory, as the water is taken from a pool of the river itself and is subject to all of the objections which pertain to shallow flowage water. It contains organic matter such as algae and water mosses, as well as certain forms of animal life, tiny fish, or fish eggs, and once received in the reservoir these propagate. In spite of the screens some of this objectionable matter gets into the pipes, and there have been difficulty with meters and complaints from water consumers. However, as soon as the water is drawn from the storage reservoir and taken from a depth of 25 or 30 feet it is believed that practically all of this trouble will be avoided.

This, however, brings up the question of ultimate purification. Mr. Fitzgerald, consulting engineer, recommended a purification plant to be installed as an adjunct to the water supply, but, after considering all the data presented, he agreed with my own recommendation that this should be deferred until a satisfactory method of removing amœba from the water had been discovered. Practically all surface waters in the Philippines contain amœba, and the long series of experiments carried out under my direction proves conclusively that slow sand filtration will not remove the amœba. The bacterial count of the raw water supplied by the new system is low, and the water itself from that standpoint is satisfactory. The watershed itself is practically free from human inhabitants and is, in consequence, uncontaminated. Any method of purification needs, therefore, to remove amœba before it can be considered entirely satisfactory. Sanitary science in the treatment and purification of water is advancing with rapid strides, but so far only by chemical treatment or ozone can the amœba be removed. Copper sulphate has been tried, but not with entire success. At the present time hypochlorite of lime seems to promise excellent results. Ozone treatment is too expensive.

I recommend, therefore, that no action toward purification be taken until the storage reservoir is in service and the water drawn from the depth above mentioned, at which depth our observations indicate amœba will be absent and the evil effects of shallow flowage be eliminated. It should be noticed, however, that in planning the gravity supply provision was made for the purification plant. The necessary head for slow sand filters is arranged for, the site selected, and should experience show it to be necessary, the plant may be installed without loss or damage to any of the works constructed. Drawings and estimates are already prepared for covering the present reservoir, although since, as stated above, the water bacteriologically is unobjectionable, I do not consider that the reservoir needs to be covered.

My own recommendation, in case purification is found essential, is that three sand filters be installed, each of three-quarters of an acre in area. Dosing the water with hypochlorite of lime and alum will allow these filters to work at the rate of 10,000,000 gallons per day per acre with an affluent practically pure. The location for these filters is just beyond the new reservoir, and they can be installed for not to exceed a half million pesos. This question should, however, be left in abeyance until the new system has completed service during one dry season under favorable conditions.

In the operation of the new system the following suggestions are offered, which must be followed if satisfactory service is to be rendered.

Whenever because of rains and the consequent rise of the river the turbidity become objectionable, the gates at the dam should be closed and the water for the city supply drawn from the reservoir during the continuance of this turbidity.

While the gates are closed the sluiceway through the dam as well as the 36-inch discharge pipe should be opened; and they should remain fully or partially open during the rainy season so as to allow the sediment to be flushed out.

Every year about the close of the rainy season when the stage of the river is about 6 feet, the water should be drawn down and workmen employed to sluice out the sand, gravel, etc., which will most certainly be deposited as the result of every flood. During the sluicing operations the gates to the city should be closed. In this way and at small expense the storage reservoir may be conserved and cleaned, while if it is neglected its capacity will be reduced and its efficiency diminished.

The pipe line should be emptied at least once a year and examined throughout. This should be done in sections so far as possible so as not to change interrupting the city supply. In emptying and filling the pipe special care must be taken to see that the air valves work properly.

At various points on the line the pipe is carried over streams or bridges, and the pipe must be examined at these points frequently to prevent oxidation where exposed to the air or only slightly covered with earth.

From time to time an examination of the pipes should be made in the rice fields near San Mateo, for it is possible that the chemicals contained in the earth may destroy the coating; and since the life of steel pipe is determined by the existence of the coating, damage thereto must be guarded against.

The tunnel and conduit need no care except a possible occasional cleaning. This can easily be done by laborers using ordinary brooms or stiff brushes, though a rotary machine patterned after that in use in Boston may be used to advantage.

The reservoir itself should be cleaned at least once a year and the time selected when the water at the dam is clear and abundant. It is probable that the beginning of the rainy season in June is the best time.

All air valves and blow-offs should be tested from time to time, and the blow-offs especially should be opened for a few minutes and any sediment blown at frequent intervals.

SEWER SYSTEM.

The sewer system comprises more than 52 miles of main sewers and laterals, ranging in size from 8 inches to 72 inches in diameter. The principle governing the design was that all sewers should start at their upper ends as near the surface of the ground as was possible, that the grade necessary for flow should be obtained by deepening the trenches, and that sewer pumping stations should be installed at intervals determined by the economical limit of excavated depth. This design, therefore, called for five substations in which the sewage was lifted from a lower to a higher level, and one main station at the foot of Calle Azcarraga, in which all sewage of the city is collected and from there pumped out to sea to such a distance as to avoid any possibility of offense.

All sewers 24 inches or less in diameter are constructed of vitrified pipe, and all above 24 inches in diameter are of concrete. It was intended to line the inverts of the larger sewers with brick, but because of the unsatisfactory quality obtainable concrete was substituted. This substitution is entirely satisfactory and has resulted in considerable economy. I need hardly refer to the difficulties of construction encountered. The narrow streets and the existence of ground water in practically every trench, as well as the beds of quicksand encountered in various places, made the construction difficult and expensive. There was also

grave danger of disturbing the foundations of buildings; and the completion of this work without an accident of importance is cause for congratulation. Two instances are particularly noticeable: On Calle Cabildo, in the Walled City, it was necessary to go far below the foundations of the Cathedral, and the timbering and bracing of this trench involved the support of the solid stone walls thereof, 50 feet in height. No sign of crack in this wall developed as a result of this operation. In Calle Tanduary a bed of quicksand was encountered which was well-nigh impassable. The contractors worked seven months to install 140 feet of pipe. In spite of all these difficulties, I desire particularly to call attention to the tightness of the sewer system. The actual infiltration of ground waters into the entire sewer system is trifling and does not amount to 10 per cent of what reasonably might have been expected. The whole district of Sampaloc was absolutely tight.

Tanduary, on account of the quicksand encountered, gave some trouble; and because of settlement shortly after the completion of the system, certain of the joints were opened and the leakage became considerable. These leaks were, however, caulked on the inside and made tight at small expense, which was borne by the contractors.

The machinery for the pumping stations was furnished and installed by Frank L. Strong, contractor, while the buildings therefor were constructed by the Atlantic, Gulf and Pacific Company. All pumps are centrifugal and driven by electric motors. The main station is direct connected; that is, the shaft of motor and pump is continuous, while the substations are geared, since the speed of the motors is far in excess of the speed of the pumps. The gears are of rawhide, designed to prevent noise and vibration. All pumps are horizontal, with vertical shafts, and so arranged as to be self-priming. Each substation is equipped with a float operating mechanism, so arranged that when the sewage in the collecting chambers rises to a certain point the pumps will start automatically. When the sewage in the collecting chamber has been discharged, the float mechanism also shuts off the power. The smallest substation is at Paco, and the largest at Santa Cruz. It should be noticed that sewage from Paco is pumped four times before it is finally disposed of.

All of the substations have operated satisfactorily since installation, but the main station gave considerable trouble for several months because it was not properly balanced. This balance can only be determined by observation during operation, and unfortunately the contractor and the chief engineer left Manila shortly after completing the installation. No attention was paid to balancing the pumps in their absence, and the impression was allowed to obtain that the pumps themselves were defective. This impression gained such currency that proposals were invited for so-called repairs, and a bid involving the expenditure of more than ₱8,000 was received. Fortunately no contract was awarded nor any work done. Immediately after my return the pumps were balanced and properly lubricated at an expenditure of less than ₱400, which expense was of course borne by the contractor. Not the least of the effects of this balancing of the pumps was the notable drop in the consumption of electric current. All pumps and motors are now operating perfectly and the entire system is a notable example of excellent construction.

Some difficulty has occurred at the main station and the Malate substation because of offensive odors escaping from the sewers. This is caused by the disposal stations of the pail system placed in the immediate neighborhood. The concentrated mass of sewage from the pails injected into the sewers without proper dilution is not only difficult for the pumps to handle, but by its mere presence

generates a considerable amount of offensive gases. Under certain conditions of wind and atmosphere these odors have been noticeable in the surrounding neighborhood, and have at times constituted a veritable nuisance. A ventilating stack has been placed on the Malate station, and it is believed that there will be no further cause of complaint. Should there be further complaint, however, it may be rectified by increasing the length of the stack. Charcoal fires have been used in the ventilators; for the most part, with entire success. Though absolute adjustment may take some little time, I wish to emphasize the fact that there should be nothing objectionable or offensive about the pumping stations.

In May, 1909, the department was authorized by the Municipal Board to proceed with the operation of the sewer system, including the installation of street connections. At the present time some 700 connections have been made, and the applications are averaging 60 or more per month. The services of the sanitary barge *Pluto* have been dispensed with, and all pails are emptied directly into the sewer system. Sewage and ground water combined amount to less than 2,000,000 gallons in twenty-four hours, and since the main pumps have a capacity of approximately 1,000,000 gallons per hour, the time necessary for operation is less than two hours daily. It might be supposed then that the pumps should have been designed for much less capacity, and this is partially true. The reason, however, has already been stated in the remarkable water-tight construction and the consequent small amount of ground water infiltration. Furthermore, there should be more than 6,000 sewer connections in the city at present.

Certain of the districts of the city are yet to be supplied with a sewer system. The most important ones are the new filled area of the harbor work and the districts of Pandacan and Santa Ana. None of these districts can be taken care of without installing additional pumping stations, and since the cost of these and the operating expense thereof are out of proportion to the benefits obtainable, I strongly recommend that all sewage in these districts be discharged for the present into the storm-water drains. The requirements of the Board of Health are such that this will involve the use of septic vaults, but these may be of simple construction and of relatively small expense. Whenever the development of these districts reached a point where this proposed method is unsatisfactory, it will be necessary to install a sanitary sewer system and provide pumping stations. Within the districts already taken care of, numerous extensions from time to time will be necessary to keep pace with the development of city construction. These extensions should be taken care of by the office of water supply and sewers, by direction of the Municipal Board, whenever it is convinced that they are needed.

The department was also charged with the care of storm water, and a system of drains has been designed which covers the entire city. This involved the fixing of grades and the determination of the limits of drainage districts. In this design all existing esteros, the river, and the bay were used. There still remains a large amount of work to be done in this direction before the city can be considered sanitary. Manila is low and flat. Many sections must be filled to bring the ground above the level of high tide. A necessary adjunct of this is the improvement of the esteros, and it is to be hoped that funds will be obtained shortly to undertake this work. Some years ago the undersigned prepared a preliminary plan for this work and estimated the cost thereof.

In conclusion, the city of Manila is now supplied with a sewer and water system, modern, sanitary, and efficient, and of a capacity sufficient for its needs for many years to come.

THE WATERSHED.

The annual report for 1903 contains Major Case's project relative to the water-supply system for the city of Manila, in which the Montalban Valley was indicated as the source for the supply of said water. On July 26, 1904, Executive Order No. 33 was issued in accordance with the provisions of Act No. 648, declaring certain area of the said valley a public reservation. The Bureau of Lands on December 10, 1908, called attention to the fact that the boundaries of this reservation, as published in said executive order, were not well determined, and on January 5, 1909, said Bureau, at the expense of the city of Manila, took charge of the survey and made a plan of said reservation which was delivered to the city on September 27, 1909. The cost of this plan was ₱5,043.48, and the area set forth thereon is 279,802,221 square meters.

The following private properties were included within the reservation: The Pinugay estate, San Isidro estate and improvements, and the urban and agricultural lands of the Boso-Boso barrio, properties which the city has necessarily to acquire to estop people from living within the reserved area from which the city's water supply is taken.

With this in view a committee was appointed to deal with the inhabitants of Boso-Boso relative to the removal of said barrio to a more advantageous location outside of the reservation boundaries, the city obligating itself to construct a new barrio with streets, town lots, and proper sites for a market, school, and church, exchanging the agricultural lands for other lands of the same nature outside of the reservation, and giving to each head of a family an indemnity to cover all expense and damage which might be caused them by this removal.

At the end of the present fiscal year, with the consent of the residents of Boso-Boso, the barrio selected for this purpose was located in a place called Pantay. This new barrio is nearly all laid out, and many families have already moved there after the construction of their houses.

DEPARTMENT OF SANITATION AND TRANSPORTATION.

This department is charged with the responsibilities of street sprinkling and flushing; street sweeping and gutter cleaning; the collection and disposal of garbage, house refuse, night soil, and dead animals; the filling of low lands; the maintenance and sanitary care of markets, matadero, and public closets; the transportation of meat from matadero to public markets; the care and administration of the city cemeteries; the maintenance and development of parks, public grounds, and tree and plant nursery; the care of city walls; the administration of all land transportation of the city, and the service of this character to the Insular Government.

All the operations performed under the various heads enumerated above were accomplished with the equipment owned by the department and with labor carried on the department pay rolls, except for repair work on equipment.

The expense of operation and maintenance of this department for the fiscal year 1910 amounted to the sum of.....	₱986,955.50
There was expended for new equipment and permanent improvements the sum of	43,534.05
Total	1,030,489.55

The above sum is distributed as follows:

Street sprinkling	₱55,505.77
Street cleaning	69,482.59
Garbage collection	125,703.56
Dead-animal collection	4,111.67
Night-soil collection	132,849.72
Vault cleaning	23,729.49
Crematory	2,497.50
Midden sheds	17,921.20
Markets	83,482.07
Cementerio del Norte	38,917.35
Paco Cemetery	2,474.50
Parks and public grounds.....	56,815.99
Plant and tree nursery.....	4,899.32
Zoölogical Gardens	6,556.84
Pound	4,681.45
Matadero	16,374.87
Transportation of meat	7,201.98
Undistributed miscellaneous expense	24,691.18
City stables, including new equipment and permanent improvements....	352,592.50
Total	1,030,489.55

To more fairly show the expense of this department, there should be deducted the value of equipment and supplies paid for by this department and transferred to other departments without cost to them, amounting to ₱34,413.51.

The following facts and figures, pertaining to the operation of the various divisions, are taken from the daily and monthly reports:

STREET SPRINKLING AND FLUSHING.

Twenty-five sprinkling wagons are owned by the department. Of these, about 21 were in a serviceable condition at all times. In addition to the wagons, a force of men, equipped with lengths of hose

which they attached to street hydrants and, in some instances, equipped with sprinkling cans, assisted in keeping the dust laid.

A force with hose and brooms was used for flushing and scrubbing the paved streets.

The streets were sprinkled 305 days.

The daily average covered was as follows :

	Square meters.
Wagons	663,742
Hose	335,796
Sprinkling cans	13,811
Total	1,013,349

STREET CLEANING.

The streets were all swept by hand labor equipped with brooms, dust lifters, and hand carts for carrying the sweepings away. Laborers with brooms, hoes, and shovels were detailed to keep the cross walks passable in bad weather and to keep the gutters free of refuse. Street canals flushed and disinfected, 5,379,886 lineal meters; gutters cleaned of earth and grass, 318,485 lineal meters; 31,723 cartloads and 31,119 hand-cart loads of street sweepings were removed from the streets.

COLLECTION AND DISPOSAL OF GARBAGE, HOUSE REFUSE, AND DEAD ANIMALS.

Refuse collected by the garbage-collection force amounted to 112,441 cart loads, a part of this being earth used to cover refuse used for filling low land; 6,027 cartloads were cremated.

The following dead animals were collected and disposed of as shown :

Animals.	Disposition.	
	Cremated.	Delivered to refining company factory.
Horses	28	547
Mules	2	28
Cattle	43	604
Cats	1,155	2
Deer	1	
Dogs	590	1,816
Goats	67	12
Hogs	1,070	119
Sheep	6	3
Monkeys	2	
Birds and poultry	5,780	
Rats	435	
Total	9,179	3,131

PUBLIC MIDDEN SHEDS AND COLLECTION AND DISPOSAL OF NIGHT SOIL.

Eight new midden sheds were placed in service during August, 1909, making a total of 133, distributed as follows:

San Nicolas	8
Tondo	40
Binondo	1
Santa Cruz	35
Quiapo	2
San Miguel	1
Sampaloc	16
Intramuros	1
Ermita	1
Malate	17
Paco	6
Santa Ana	2
Pandacan	3

An average of 1,751 pails were removed from public midden sheds daily, which would, at regular rates, amount to ₱52,530 for the year. This sum should be added to the amount of ₱17,921.20, expended for midden sheds, making a total expense of ₱70,451.20 for public midden sheds for the year.

The following shows average number of pails removed and cleaned daily and number of loads removed from vaults and cesspools during the year:

From—	Pails cleaned.	Loads removed.
Private houses	2,263	3,107
Public buildings	203	1,324
Midden sheds	1,751	
Military buildings	27	
Total	4,244	4,431

The steam barge *Pluto* was placed out of service during the month of December, 1909, and all night soil collected is now emptied into the sewer at the two disposal stations, one near the pumping station on Calle Azcarraga and the other in Malate near the Herran Market.

CITY POUND.

The following table shows animals impounded and the disposition of same:

Animals.	On hand July 1, 1909.	Im-pounded.	Re-deemed.	Sold.	Released, escaped, died.	De-destroyed.	On hand June 30, 1910.
Horses and colts		103	99	1	3		
Mules		3	2		1		
Carabaos		81	80				1
Cattle		29	28				1
Sheep		5	1	3	1		
Hogs	16	564	256	297	11		16
Deer		4	2	1	1		
Goats	15	200	7	193	8		7
Dogs	28	2,393	296	47	166	1,893	19

TRANSPORTATION OF MEAT TO MARKETS.

The following quarters and carcasses of meat were delivered from the public slaughterhouse to the public markets, cold storage, and sausage factory:

Markets.	Pig carcasses.	Beef quarters.	Goat carcasses.	Sheep carcasses.
Divisoria	29,675	34,014		
Quinta	17,077	44,045	1,023	8
Arranque	7,107	11,998		
Sampaloc		2,368		
Anda		645		
Cold storage	1,797	1,164		
Sausage factory		143		
Total	55,656	94,377	1,023	8

CEMETERIES.

Interments in the two city cemeteries for the fiscal year were as follows:

	Male.	Female.	Total.
Cementerio del Norte	3,122	2,420	5,542
Paco Cemetery	217	163	380
Total	3,339	2,583	5,922

The total interments in Cementerio del Norte from date of opening this cemetery until June 30, 1910, were 31,628.

The grounds and buildings were kept in good condition at both cemeteries.

PARKS AND PUBLIC GROUNDS.

The care and maintenance of the city parks, public grounds, and city walls grows into a larger proposition each year, on account of the increase in area as each piece of unimproved ground is parked and put in shape. The gradual working out into lawns of the areas on Wallace Field, around the walls, and on the New Luneta fill, all of which are large plots of ground, continually adds to the cost of park maintenance.

The walls have been improved by cutting away injurious trees and plants and substituting plants which will add to their appearance but not cause injury to the masonry work.

TREE AND PLANT NURSERY.

The plant nursery has supplied the various parks and streets with young plants and trees, and a number of shipments have been made to army and navy stations and towns in several provinces.

A catalogue of plants at the nursery and value of same is being prepared.

LAND-TRANSPORTATION SERVICE.

The total value of land-transportation services, rendered and computed at regular rates, amounted to ₱556,689.25. Deducting from total stable expenses the amount of ₱34,413.51 paid out for equipment and supplies, which were transferred to other departments without cost, leaves the sum of ₱561,969.57, an amount ₱5,280.32 greater than the value of transportation issued, computed at existing rates.

But examination of the land-transportation equipment shows an inventory value on June 30, 1910, of ₱449,582.82, as against ₱428,491.13 on June 30, 1909, an increase of ₱21,091.69.

PUBLIC MARKETS.

The market collections for the fiscal year 1910 amounted to the sum of ₱278,736.85, as compared with ₱262,765.50 for the previous year, being an increase of ₱15,971.35, or about 6 per cent.

The Anda Market, situated in the Walled City, was discontinued near the close of the year. The patronage of this market has never been satisfactory, owing, probably, to its proximity to one of the larger markets. This market was established in 1903, at a cost to the city of ₱53,500. The annual receipts from the comparatively few stalls occupied have amounted to scarcely more than the operating expenses, and a large proportion of those occupied were for the sale of cooked foods, such as could be found on sale at the near-by tiendas.

Experience shows that the smaller or neighborhood markets rarely prove a success, for the reason that a very large number of those dependent upon the public market for their daily supply of meat, fish, fowl, fruit, vegetables, etc., seek the larger market, where a greater variety of such products can be found from which to make selection.

There are eight public markets now in operation, and two new markets are projected and will probably be opened to the public during the coming year. Of these, one will be located on Calle Looban, near the Paco Bridge, and will accommodate the districts of Paco, Malate, and Ermita. The other is located in Tondo district, near the intersection of Calles Lemery and Sande and adjacent to the Pretil Bridge. This latter market will relieve, to a considerable extent, the present overcrowded condition of the Divisoria Market, and will also be a great convenience to the fish industry. It is believed that the proposed Tondo Market will eventually become the central fish market of the city.

The market known as the Herran Market will be closed upon the completion of the Looban Market and the building removed. The establishment of the Philippine General Hospital and the Medical School building on grounds adjacent to this market make its removal a necessity.

The new market on Calle Looban will conveniently accommodate the patrons of the present Herran Market and give the people of Paco, and also a large population in the districts of Ermita and Malate, better market accommodations than heretofore enjoyed.

MATADERO.

The receipts from the matadero for the fiscal year 1910 exceeded those of the previous year by ₱6,473.31, amounting, in the aggregate, to the sum of ₱190,257.42.

There were slaughtered during the year 25,729 cattle, 63,177 hogs, and 1,052 sheep. It would be no exaggeration to state that 99 per cent or more of the cattle slaughtered in Manila are imported, most of them coming from the different parts of China and from Singapore.

The present quarantine regulations will result in reducing the importation of live cattle from China or from any other country, and the revenues from the matadero will, as a matter of course, be correspondingly decreased.

MUNICIPAL SANITARY WORK.

During the fiscal year ending June 30, 1910, the works of water supply and sewer systems were completed, and the systems are now in operation. Houses are being connected with the sewer and the water pipe lines are being extended to the outlying barrios of the city. All of this will undoubtedly contribute largely to the improving of the sanitary conditions of the city.

Referring to sanitary work of a special nature, the expense of which is paid out of the fund of ₱207,000 received by the city in payment for the Pasig River walls, the city engineer reports as follows:

The general sanitary conditions in certain sections of the city at the beginning of the rainy season in 1909 made it apparent that a radical change in the manner of dealing with this question would have to be formulated. It had been apparent for some time that the proper way to handle the question was to consider the general sanitary improvement of the city as a whole, making the improvement of each section a part of the general scheme and interdependent on that scheme. This manner of treatment had not been possible up to this time owing to lack of sufficient funds. The assurance that a definite sum was to be set aside for this purpose provided an incentive for the preparation of plans, with an assurance of the scheme being carried to completion.

The completion of an accurate map of the city on a scale of 1 : 5,000, and, later, the use of the map to show the contours of the city, made possible the laying out of a comprehensive street system together with "sanitary barrios" for the poorer congested sections. This map filled a much-felt want, in that it made possible the establishment of street grades at elevations that would not obstruct the natural drainage of the surrounding country, provided always that the land was higher than the elevation of maximum high tide. This map also

made clearer the extent of the low sections of Manila, and it was possible to determine from it the most economical manner of improving these sections.

The carrying forward of the various sanitary projects was made possible in April, 1910, by the transfer to the city of ₱206,784.77 by the Insular Government in payment for the Pasig River walls.

In selecting the projects to be carried out, it was kept in mind that in order to give the best results and immediate relief the fund must provide for new streets and alleys, sanitary barrios, improvements of surface drainage, installation of extra public closets and public hydrants, and a sanitary building site for each house removed from a congested insanitary section.

The first sections selected for actual construction work were the San Lazaro district and the Sampaloc district. Work was commenced in these districts in April, 1910, and pushed vigorously until the rainy season set in, when it became apparent that the cement canal work was costing about 40 per cent over the cost of the work in the dry season. Owing to this fact all cement work was discontinued until the coming dry season, the digging of ditches to provide relief in flooded sections being the only work done.

The work accomplished is as follows:

San Lazaro district.—The work performed in the San Lazaro district may be divided into three portions: The construction of cement canals and culverts in the Government portion; the opening of ditches and construction of culverts in the church portion; and the general ditching and installation of culverts in the section along the Lico Road, north of the railroad. The grades of the gutters are such as to give velocity of not less than 3 feet, and the level of each gutter is sufficiently below the existing ground surface to allow the construction of the interior gutters with sufficient grade to drain these interior blocks. The gutters constructed varied in area from 0.04 square meter to 1.45 square meters, and the depth of the canal from 0.15 meter to 1.50 meters below the elevation of the ground surface. The work performed is as follows: 9,378.60 lineal meters of cement canals constructed; 711 lineal meters of ditches excavated, but not lined with cement; 24 reinforced-concrete culverts installed; total cost of work to June 30, 1910, ₱23,117.82.

Sampaloc district.—The opening of new streets through this district and the construction of a sanitary barrio in the Legarda estate north of Calle G. Tuason, necessitated the moving of 130 houses. The houses were moved out of the line of the new streets on the adjoining property or, where the same was not available, they were transported to sites in the Legarda sanitary barrio. Every house moved was put back in as good condition as it was before its removal. The work of opening the Legarda sanitary barrio was commenced in May, and is still in progress. The cement canals and the class of construction was the same as that described in connection with the improvement of San Lazaro estate. The work accomplished to June 30, 1910, is as follows: 3,348 lineal meters of cement canals constructed; 233 lineal meters of ditch opened, but not cemented; 4,860 lineal meters of streets opened; 5 concrete culverts constructed. The total cost of this work to June 30, 1910, was ₱12,228.11.

Other projected improvements.—The following projects are under consideration in connection with the general sanitary improvement of Manila: San Lazaro, north of Tayuman; the section along Antonio Rivera and Tayuman extension; the

barrio of Santa Monica; the barrio of Bancusay; the section along Calle Sande; the section north and south of Calle Santa Mesa; the proposed Vito Cruz barrio; the Santa Clara estate; the section along Calle Lepanto; the section along Calle Florida; and the general improvement of small esteros that are used for drainage only.

Plans have been completed for a combined sanitary closet, bath, and laundry, to be built of concrete, for the use of the inhabitants of sanitary barrios.

The sanitary work performed by the different city departments, the expense of which is borne by the appropriations made for each department, is as follows:

DEPARTMENT OF ENGINEERING AND PUBLIC WORKS.

The plumbing inspector inspected and passed upon all plumbing work installed in the city, the estimated cost of such installations for the year being ₱255,536.15. The digging of ditches for draining low lands and filling of city land was done under the supervision of the sanitary inspector. Eight houses of strong material and 101 of light and mixed material were condemned and removed during the year. Twenty-one municipal buildings were connected with the new sanitary sewer, in several of which new plumbing systems were installed.

Expended by department of engineering and public works for sanitary work.

Sanitary barrios (Ordinance No. 133):

Legarda estate improvements.....	₱12,228.11	
San Lazaro estate improvements.....	23,117.82	₱35,345.93
Sanitary map of the city of Manila.....		7,575.20
Draining and filling of low lands.....		6,925.67
Esteros dredged, 13,099 cubic meters of material removed.....		11,214.71
Extensions constructed to sanitary sewer, 1,064 lineal meters.....		7,666.31
Maintenance, sanitary sewer system (April, May, and June)	₱6,198.68	
Prior to April	580.31	
		6,778.97
House connections to sanitary sewer system for three months ending June 30, 2,750 linear meters laid.....		12,365.05
Public hydrants installed, 13.....		1,063.18
Cleaning and repairing sewers and drains.....		12,091.71
Construction of two sewerage disposal stations.....		8,850.00
Connecting municipal buildings with new sanitary sewer, installing new plumbing, repairs, etc.....		8,143.97
Construction of landing shelter, Calle Nagtahan.....		194.81
Sanitary inspector, inspection and supervision.....		3,480.00
Plumbing inspector, inspection expenses.....		4,744.00
Total		126,439.51

DEPARTMENT OF SANITATION AND TRANSPORTATION.

This department collected and disposed of 112,441 cartloads of refuse and 12,310 dead animals; cared for 134 public midden sheds; cleaned 1,549,178 pails, the daily average number of pails cleaned being 4,244, as follows:

Private houses	2,263
Insular buildings	26
City buildings	177
Midden sheds	1,751
Military buildings	27
Total	4,244

Removed 3,107 wagonloads from vaults on private property and 1,324 wagon loads from vaults in public buildings; swept an average of 1,741,380 square meters of street surface daily; flushed, during the year, 5,379,836 lineal meters of canals and disinfected same; cleaned 318,485 lineal meters of gutters; removed 31,723 horse-cart loads and 31,119 hand-cart loads of street sweepings.

Expended by department of sanitation and transportation for sanitary work.

Collection and disposal of garbage, including operation of crematory..	₱132,271.63
Collection and disposal of night soil.....	174,365.46
Street cleaning	69,417.94
Total	376,055.03

LAW DEPARTMENT.

The following cases were filed for violation of the sanitary laws:

Court of First Instance.....	4
Municipal court	350

Disposition.

Convictions	313
Dismissals	11
Acquittals	25
Bail forfeited	1
Pending	4

POLICE DEPARTMENT.

During the period from July 1 to November 21, 1909, an extra detail, averaging 44 men daily, performed duty with the Bureau of Health, as follows:

During the month of July, 1909, an average of 32 third-class patrolmen daily, at ₱60 per month.....	₱1,920.00
1 second-class sergeant, 19 days at ₱100 per month.....	63.33
During the month of August, 1909, a daily average of 45 third-class patrolmen at ₱60 per month.....	2,700.00
1 second-class sergeant, one month at ₱100.....	100.00

During the month of September, 1909, a daily average of 47 third-class patrolmen at ₱60 per month.....	₱2,820.00
1 second-class sergeant, 28 days at ₱100 per month.....	93.33
During the month of October, 1909, a daily average of 50 third-class patrolmen at ₱60 per month.....	3,000.00
1 second-class sergeant, 29 days at ₱100 per month.....	96.67
From November 1, to 21, 1909, a daily average of 63 third-class patrolmen at ₱60 per month.....	2,646.00
1 second-class sergeant, 20 days at ₱100 per month.....	66.67
	<hr/>
	13,506.00
In addition to the above, a regular detail of 19 men performed duty daily—19 men at ₱60 per month for twelve months.....	13,680.00
	<hr/>
Total	27,186.00

DEPARTMENT OF LICENSES.

A total of 649 licenses of various classes were denied, for sanitary reasons, during the fiscal year.

SUMMARY.

Expended by department of engineering and public works.....	₱126,439.51
Expended by department of sanitation and transportation.....	376,055.03
Expended by department of police.....	27,186.00
	<hr/>
Total	529,680.54

CITY SCHOOLS.

Statement of expenses of this department during the fiscal years 1908, 1909, and 1910.

Fiscal year.	Salaries and wages.	Contingent expenses.	Total.
1908	₱199,461.69	₱62,354.74	₱261,816.43
1909	216,598.43	58,756.57	275,355.00
1910	235,180.05	53,902.94	289,082.99

The above figures show operating expenses only. The expenditures for new buildings and cost of repairs to old buildings during the past three years would aggregate fully ₱100,000.

OFFICE FORCE.

The office force of the department of city schools consists of 1 superintendent of city schools; 1 clerk, class 6; 1 clerk, class 9; and 1 clerk, Class D.

There are 409 teachers in Manila, of which number 353 are Filipinos and 56 Americans. Three hundred and fifty-one of the Filipino teachers are paid by the city, as seen by the following table, and the remaining teachers, 58 in number, and the superintendent are paid by the Insular Government.

Number of teachers employed and monthly salaries paid, March 31, 1910.

Name of school.	P25.	P30.	P40.	P50.	P60.	P70.	P79.	P80.	P90.	P100.	P110.	P120.	Total.
American				^a 1									1
Concepcion	3		5		1	1					1		11
Ermita	3		6	1	1	2			1				14
Gagalangin			3		1	1		1					6
Intramuros	5		11		2	2		1		1			22
Malate	4		8	1	2	5		3				1	24
Manila High School		1											1
Meisic	4		18	1	^b 8	9		2	1	1		1	45
Paco Intermediate	1		2	^b 3	1	1							7
Paco Primary	3		5	1	2	1				1			13
Pandacan	2		1	5	1	1				1			10
Peñafrancia	2		2		1			1					6
Sampaloc Intermediate	1		1	1	1	1		1			1		6
Sampaloc Primary	4		11	1	1	4		3				1	25
San Lazaro	2		3						1				6
San Nicolas	1		10		5	4						1	21
San Sebastian	3		11		2	2		1	1				20
Santa Ana	3		5		1	1		2	1				12
Santa Cruz Advanced	2		3		1	2	1	^b 2			1		12
Santa Cruz Primary	3		9		3			1			1		17
Santa Mesa	3		8		3	4			1				19
Singalong	3		2		2	3		1		1			12
Tondo Intermediate	1		1	^b 2	1	1		1	1				8
Tondo Primary	1		3	1		3		3					11
Trozo	2		6			2							10
Zurbaran	1		7	2				1	1				12
Total	^a 57	^a 1	^a 137	15	45	50	1	24	8	5	4	4	351

^a Temporary teachers.

^b One temporary teacher.

With regard to the effectiveness of the Filipino teachers as independent workers, the superintendent of schools reports as follows:

These teachers do very well to the limit of their attainments, but in their rate of development they have not succeeded in keeping pace with either the natural increase in subjects taught or the improvement in methods which might reasonably be expected. The result has been that the demand for supervision and direction by trained American teachers is as great as formerly. It is hoped that this is one of the difficulties which time will remove, but the whole matter is still clearly in the realm of speculation.

MANILA CITY SCHOOLS.

The system of instruction established in Manila provides for a division into three classes—primary, intermediate, and secondary. There are four primary school districts, as follows:

District No. 1: Santa Ana, Pandacan, Paco, Sampaloc, Santa Mesa, Peñafrancia. District No. 2: Malate, Singalong, Concepcion, Ermita, Intramuros. District No. 3: Santa Cruz, Cervantes, San Lazaro, Quiapo, San Sebastian, Trozo. District No. 4: Tondo, Gagalangin, San Nicolas, Meisic, Chinese school.

Intermediate schools are located in Intramuros, Sampaloc, Paco, and Meisic.

There is but one secondary school, namely, the Manila High School, situated in the Walled City.

There is one special school where primary, intermediate, and secondary instruction is given to English-speaking pupils. Intermediate and primary instruction is also given at the Santa Isabel Convent. Primary instruction is given at the Hospicio de San Jose.

Primary schools comprise a course of four years, intermediate three years, and secondary four years, so that the pupil completing his studies and obtaining grade from the high schools is supposed to have had eleven years' instruction.

Enrollment and attendance in secondary, intermediate, and primary schools.

School.	Annual enrollment.	Average monthly enrollment.	Average attendance.	Percentage of attendance.	Number of schools.	Number of teachers.		
						American.	Filipino. In-sular.	Municipal.
Secondary schools:								
American	27	16	15	100	1	4		
High school	746	550	536	98	1	14		
Total	773	566	551	99	2	18		
Intermediate schools:								
American	93	61	60	98	1	3		
High school	138	57	54	96	1	2		1
Paco	400	298	286	97	1	5		7
Sampaloc	414	269	259	98	1	7		6
Santa Isabel Convent	22	22	22	100	1			
Tondo	588	377	369	99	1	7	1	8
Total	1,655	1,084	1,050	98	6	24	1	22
Primary schools:								
District No. 1	3,266	2,066	1,856	94	6	1		85
District No. 2	2,798	1,723	1,632	97	5	1		83
District No. 3	3,155	2,042	1,801	96	6	1		77
District No. 4	3,952	2,976	2,799	96	4	1		83
American	226	147	134	98	1	5		1
Hospicio de San Jose	180	168	165	98	1	1	1	
Santa Isabel Convent	108	108	108	100	1	1		
Total	13,685	9,232	8,495	97	24	11	1	329
Special teachers						3		
SUMMARY.								
Secondary	773	566	551	99	2	18		
Intermediate	1,655	1,084	1,050	98	6	24	1	22
Primary	13,685	9,232	8,495	97	24	11	1	329
Special teachers						3		
Grand total	16,113	10,882	10,096	98	32	56	2	351

School buildings—Location and rent paid.

School.	Location.	Monthly rental.
American	417 Nozaleda, Paco	₱500.00
Concepcion	14 Marcelino, Ermita	100.00
Ermita	118 Real, Ermita	120.00
Gagalangin	380 Gagalangin, Tondo	(b)
Intramuros	134 Beaterio, Intramuros	200.00
Malate	340 Nueva, Malate	60.00
Do	417 Plaza de Malate, Malate	(b)
Manila High School	172 Victoria, Intramuros	(b)
Meisic	1-4 Meisic, Binondo	(a)
Paco Intermediate	269, 273 Herran, Ermita	240.00
Paco Primary	31 Vives (Interior), Paco	180.00
Pandacan	9 Sementera, Pandacan	80.00
Peñafrancia	25 Peñafrancia, Paco	60.00
Sampaloc Intermediate	4 Alejandro VI, Sampaloc	180.00
Sampaloc Primary	228 Alix, Sampaloc	225.00
San Lazaro	688 Cervantes, Santa Cruz	80.00
San Nicolas	50 San Fernando, S. Nicolas	(a)
San Sebastian	254 San Sebastian, Quiapo	150.00
Santa Ana	40 Santa Maria, Santa Ana	100.00
Santa Cruz Advanced	97 Dolores, Santa Cruz	150.00
Santa Cruz Primary	102 San Pedro, Santa Cruz	150.00
Santa Mesa	530 Santa Mesa, Sampaloc	200.00
Singalong	146, 147 Singalong, Malate	80.00
Tondo Intermediate	Calle Sande, Tondo	(b)
Tondo Primary	99 P. Herrera, Tondo	100.00
Trozo	232 Diaz, Trozo	120.00
Zurbaran	35 Zurbaran, Santa Cruz	200.00

^a Owned by the Government.^b Owned by the city.

As will be observed, the sum paid out for rents would be a fair rate of interest on a capital of nearly a million pesos.

The Board has included in its estimates for the ensuing year an item of ₱75,000 for the construction of a reinforced-concrete building in the district of Paco, and it will be the policy of the Board to provide for the construction of at least one new school building each year until the needs of the department are adequately provided for.

The year's development of city school institutions has been reasonably satisfactory. With reference to the results obtained from the present system of industrial education the superintendent of schools reports as follows:

The most satisfactory improvement noted has taken place along the line of industrial education. It may now be safely assumed that the necessary process of industrial experiment has been completed and that the industrial department of the city schools is soundly established. This includes all schools with the exception of the High School, in which the demands of the academic course are such as to make extensive industrial development impracticable. In the primary schools this work is extremely satisfactory. The ideal toward which effort has been directed is a complete business establishment rather than one in which only a few of the details incident to business are taught. Materials are purchased locally and abroad, orders for goods taken, designs executed, finished articles produced, schedules of prices arranged, sales and bank deposits made, accounts kept and all carried on in such a way as to definitely establish the idea of business responsibility.

* * * * *

The result of the recent year examinations show clearly that an extensive industrial department may be carried on without detriment to the regular work.

The enrollment at the city schools has been larger this year than in any preceding year, as may be seen by reference to the following statement:

School enrollment during the month of June, 1902 to 1910.

1902	2,244
1903	3,046
1904	5,767
1905	7,803
1906	8,311
1907	8,436
1908	9,166
1909	11,113
1910	13,343

This increase in pupils necessitated an increase in the number of instructors, so that 37 teachers were added to the 372 employed during 1909, making a total of 409 for the year 1910.

The increase in teachers made necessary an increased expenditure for salaries as may be seen in the tabulated statement at the beginning of this report.

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